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(1) Carter, S.: M. Clin. North America 37:315, 1953.

(2) Maltby, G. L.: J. Maine M. A. 48:257, 1957.

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# IN LITTLE WAYS

Amos R. Koontz, M.D.

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*It isn't love's going that hurts my days,  
But that it went in little ways*

---

**W**HEN OUR ANCESTORS left Europe to escape oppression of various sorts and to build new homes in a new country where they could enjoy "life, liberty, and the pursuit of happiness," little did they imagine that their descendants would one day lose, little by little, the freedoms they had established and would be looking for the same escape which they had sought in Europe.

That is just what has happened, however. European ideologies have been brought to this country and are gradually supplanting the fundamental concepts on which this great country was founded. The situation has become so bad that many of our fine youngsters, whom the Washington "dogooders" have not been able to indoctrinate, are looking for some place else to go. Such places are now hard to find.

It is no wonder that an ambitious young man, eager to stand on his own feet, is casting his eyes about for a new country. He is disgusted by the hordes of people who would rather stay on relief than work. I know of a summer resort area where the residents used to work in the hotels four months of each year and at some other occupation during the rest of the year. Now they work in the hotels during the summer and accept unemployment compensation the rest of the year.

Furthermore, a premium has been put on illegitimacy in this country. No wonder! The more illegitimate children a woman has, the greater the federal largess. In one county in Maryland there are more illegitimate infants born each year than there are boys and girls who graduate from high school. Disreputable women make a profit from

illegitimacy, and the Federal Government is behind this program. What has become of our standards of decency and morality?

Douglas MacArthur said that only those are fit to live who are not afraid to die. It could be added that only those are fit to enjoy the fruits of the earth who are not afraid to put their shoulders to the wheel to produce them. Instead of this philosophy, our government is encouraging sloth and parasitism. A large percentage of our people who should be active and productive are content (and are being encouraged to be content) to live on the fruits of the labor of others.

William Alexander Percy, in his delightful novel "Lanterns on the Levee," said: "Leveling down's the fashion now, but I remember the bright spires—they caught the light first and held it longest." If we ever forget the bright spires, we shall become a nation of lowgrade uniform mediocrity, which God forbid!

Samuel Gompers wrote that "professional Socialism accompanies instability of judgment or intellectual undependability caused by *inability to recognize facts.*"

The High Priests in Washington are not even professional Socialists; yet they are not only willing, but eager, to sacrifice the liberty of one hundred and seventy-five million Americans on the altar of political greed and expediency. In 1948 they tried to ram the National Compulsory Health Insurance Bill down the throats of the American people in one choking dose. It has become evident even to these wishful thinkers that this cannot be done; so they have decided, if not with intelligence, at least with a species of low cunning

common to these gentry, to break the pill up into small bits, dip the bits in a chocolate coating of seemingly harmless legislation, and offer them one by one until the whole pill is swallowed. Unless these efforts are checked promptly and effectively, we may soon find ourselves substituting the word *liberty* for *love* in the little poem at the head of this article and repeating those lines in bitterness and self reproach.

The last Congress passed the Kerr-Mills Bill, which provides medical care for everyone over 65 who needs help by means of a federal-state matching program. Some states have already implemented this program, and all the other states, except one, are in the process of doing so. This bill provides for administration of the program on a local (state and county) level, which is as it should be. Local self-government is the foundation of democracy.

The present Congress is now reviving the old Forand Bill (now called the King Bill), which would give free hospitalization and nursing care (and some medical services) to *all* people over 65 years of age who have social security, whether they need it or not. This bill, if enacted, would be administered solely from Washington. The local people would have no say in the matter. Is this democracy or dictatorship?

Fifty per cent of people over 65 have some form of health insurance. This type of insurance is constantly being expanded and the coverage being made broader. Forty-seven of sixty-nine Blue Shield plans accept individuals (not groups) over 65 regardless of employment or state of health. More plans are expected to follow suit soon. For those individuals without insurance or other means, the Kerr-Mills Act is the answer.

What, then, is the reason for reviving the Forand Bill? It is obviously a political maneuver to start socializing medicine. A well known apostle of socialism, when asked why include in the bill people over 65 who have plenty of means, replied, "Because they won't spend it prudently." He also said that this bill was simply "to get a foot in the door and then expand." It is obvious, then, that this is the attempt of the Welfare State to introduce the entering wedge of socialized medicine.

This is a dangerous approach, because many sound-thinking people will not be looking for the Ubangi in the cordwood and will not spot the

subterfuge until it has become law. Once it has become law, it will be impossible to get it off the books. In spite of the fact that Great Britain and New Zealand have elected conservative governments, their socialist laws are still on the books.

Those of us who oppose such bills as the Forand Bill (or King Bill; a skunk cabbage by any other name would smell as bad) are often chided for not offering a substitute. Is not the fact that the American people have the best medical service in the world enough answer? What further substitute do they want? (It is true that medicine is not free in this country; neither are cosmetics, tobacco, or liquor, which cost the people a great deal more money than medical care does.) Are not the Ten Commandments replete with "Thou Shalt Nots"? Does anyone want to chide Moses or the Almighty for this negative approach? Is it not sufficient (and correct) to oppose evil because it is evil? Suppose the Federal government adopted rape as the national policy. (They are already raping all thrifty and industrious people of a large part of their earnings in order to support their nefarious socialistic schemes.) In order to oppose such a policy, would one be obliged to offer mayhem or housebreaking as a substitute?

The socialists and near-socialists taunt us by asking what we are *for*. If we haven't made it abundantly clear, let's restate our position. The main thing we are *for* is individual freedom. This is what our forefathers stood for and what we still stand for. We are *for* charity for those who need it, but not on a compulsory basis. We are *for* the right to be an individual, to be master of our own destiny, not to be merely an automaton who jumps when someone in Washington pulls the strings. We are *against* anything which opposes these principles. We agree with Holmes Alexander that work and wealth are two sides of the same coin.

We strongly believe that the present retirement laws are absurd. The late William H. Welch retired from the chair of pathology at Johns Hopkins at the age of 68. He then organized the Johns Hopkins School of Hygiene, which he directed for some years. At 76 he gave this up, whereupon he organized and directed the Institute of the History of Medicine. He was as brilliant and effective as ever and did not retire until illness overtook him at the age of 82. This is in sharp contrast with the usual procedure. With



one hand society does everything possible to extend the life of man; with the other it writes him off as useless because of the date of his birth.

Someone recently said that the service you render is the rent you pay for the space you occupy. Should not one be allowed to continue that service in order to pay his rent as long as he is fit? Huxley spoke of that immense capitalized experience of the human race, which we call knowledge of various kinds. What a shame to dissipate that knowledge and experience at the age of 65? Halsted remained active in teaching and research and was as stimulating as ever until he died at the age of 70.

Susan Ertz said that millions long for immortality who do not know what to do with themselves on a rainy Sunday afternoon. We have millions in this country yearning for "security," who are not willing to do anything themselves to earn it and do not know what to do with it (except loaf) when they get it.

We must remember that only the productive can be strong and only the strong can be free.

Oliver Goldsmith hit the nail on the head when he said:

*Ill fares the land, to hast'ning ills a prey,  
Where wealth accumulates, and men decay;  
Princes and lords may flourish, or may fade;  
A breath can make them, as a breath has made;  
But a bold peasantry, their country's pride,  
When once destroy'd, can never be supplied.*

It can hardly be said that we ever had a peasantry in this country, as was the case in Europe. We did have and still have a bold and strong working class, however. I know from my experience with hundreds of them as patients that they still want to be self reliant and independent. Our labor leaders and our government are striving to make them dependent automatons. We should preserve them while there is still a chance.

Gone are the days when one would rather be right than president. Can we retrieve them? I don't know, but we can try.

"*Dulce et decorum est pro patria mori*" (It is sweet and proper to die for one's country), said Horace. Now the fashion seems to be that our country should die for us, and that is just what it is doing, little by little. History has shown many examples of the decline of great nations because of the eroding effects of socialism. Neither Greece nor Rome fell because of external enemies. Be-

cause of the internal decay produced by socialism, their people became soft, just as our people are becoming soft. I personally noted the difference in the attitude of the average soldier in World War I from that of World War II. In World War I, no man who went to France expected to come home until the war was over, however long that might be; in World War II, men by the thousands claimed, after one short island campaign in the Pacific, that they had done their duty and should be sent home.

"Death is not rare, nor is it of ultimate importance. Heroism is both."

Some people say we are fighting a losing battle. An old Chinese proverb suggests that when rape is inevitable, relax and enjoy it. There are many doctors who say that socialized medicine is coming, so why not accept it as inevitable? I do not believe that the majority of the people in this country wants it. They are too levelheaded, too full of common sense. I believe that we can win if we fight, but fight we must. The forces against us are determined and well organized. We must be just as determined and we must become organized. All of us should write to our congressmen and urge our nonmedical friends to do the same.

Even if we had not the chance of the proverbial snowball of winning, our sense of right and our belief in the eternal verities should make us keep up the fight. Marshall Pilsudski said, "To be vanquished and not surrender, that is victory." I do not believe that we shall be vanquished, but even if we were certain to be, we should never give up the fight. Remember the old Roman of whom it was said, "*Lux extincta lucet*" (The light extinguished still shines). If we continue to fight for right, our light will so shine that after we are dead posterity will be proud of us. I close with the words of that fine Canadian doctor, John McCrae, who died in action in World War I:

*Take up our quarrel with the foe!  
To you from failing hands we throw  
The torch; be yours to hold it high.  
If ye break faith with us who die  
We shall not sleep, though poppies grow  
In Flanders fields.*

1014 St. Paul Street  
Baltimore 2, Maryland

## The Calculation of

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# A DIABETIC DIET

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Ruth L. Dyson\*

**T**HE TREATMENT of a diabetes mellitus patient can be performed adequately only by balancing three main factors: diet, insulin, and exercise.

In most respects, the Recommended Dietary Allowances of the National Research Council (1) apply to the diabetic patient. There is little evidence that the stabilized, well-controlled diabetic patient has increased nutritional needs.

In the calculation of a diabetic diet, the caloric needs of the patient are usually the first consideration. The caloric requirements depend on many factors, such as sex, age, activity, and climate. Caloric allowances recommended by the National Research Council may be excessive for many urban, sedentary workers. For middle-aged adult diabetics, initial caloric provision of thirty to thirty-five calories per kilogram of ideal body weight has proven satisfactory. This may be increased to forty to fifty calories per kilogram in nutritionally depleted or extremely active young patients. If obesity accompanies the diabetes, intakes of twenty to twenty-five calories per kilogram of ideal weight and lower may be used for weight reduction (2).

As recommended by the National Research Council, the minimum amount of protein in the diet should be 1 gram per kilogram of ideal body weight, which totals about fifteen to twenty per cent of the total daily calories. An increased amount of protein is recommended for diabetic children and adolescents.

Many dietary surveys indicate that fat contributes about forty per cent of the total calories in the American diet. More research studies are needed to determine whether a lower fat intake

or a higher intake of unsaturated fatty acids will help delay the onset of atherosclerosis in non-diabetic and diabetic patients. Some physicians hold that until additional information is forthcoming, the overall average caloric intake from fat should not exceed thirty-five or forty per cent (3).

For diabetic patients, about forty per cent of the total daily calories should be in the form of carbohydrates. A helpful shortcut to arriving at such a carbohydrate intake is to provide as grams of carbohydrate a figure which is one-tenth of the total calories. For a 2,000 calorie diet, this would provide 200 grams of carbohydrate. It is preferable not to reduce the carbohydrate content below 125 grams on low-calorie intakes (2).

In 1950, through the combined efforts of the American Dietetic Association, the American Diabetes Association, and the Diabetes Branch of the United States Public Health Service, the following data were prepared: a set of food values for figuring diabetic diets, a short method for calculating the diet, and several lists of foods of similar food value which were called food exchange lists (4). Further information on food exchange lists are available from some pharmaceutical companies.

The accompanying tables and commentary were in part prepared by Elizabeth K. Caso, a member of the above committee, in the hope that they would be of help to the physician in prescribing a diet for diabetic patients (5).

### Selection of the Dietary Prescription

**A** DIETARY PRESCRIPTION is based on the caloric needs of the patient. Caloric requirements are influenced by present weight in relation to desirable weight, activity, and body size. It is recommended that the desirable weight table be used and that an appraisal be made of the usual amount of activity in which the patient is involved. From this, select the dietary prescription best suited for the patient.

The selection of the dietary prescription for children is more difficult than for adults. Sufficient calories must be supplied for proper growth and development and to meet energy needs. Diets for children at different ages and with different caloric requirements can easily be developed by adding additional amounts of food exchanges,

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\*Assistant Professor of Nutrition, School of Nursing, University of Maryland. Project of Diet Therapy Section of the Maryland Dietetic Association.

# ADULTS

Weight and Activity	Height below 5'6"		Height above 5'6"	
	Caloric Prescription	Corresponding Meal Plan No.	Caloric Prescription	Corresponding Meal Plan No.
Ideal Weight				
Sedentary	1800	3	2200	4
Moderately active	2600	8	3000	9
Very active	3000	9	3500	7
Overweight				
Sedentary	1200-1500	1 or 2	1500-1800	2 or 3
Moderately active	1800	3	2200	4
Very active	2200	4	2600	8

# CHILDREN

Age of Child	Caloric Prescription	Corresponding Meal Plan Number
About 8 years	1800	5
10 to 12 years and girls 13 to 18 years	2600	6
Boys 13 to 18 years	3500	7

# CALORIC LEVELS OF SAMPLE MEALS FOR DIABETICS

Meal Plan	Carbohydrate (gm.)	Protein (gm.)	Fat (gm.)	Energy (Calories)
1.	125	60	50	1200
2.	150	70	70	1500
3.	180	80	80	1800
4.	220	90	100	2200
5.*	180	80	80	1800
6.*	250	100	130	2600
7.*	370	140	165	3500
8.	250	115	130	2600
9.	300	120	145	3000

\*Planned particularly for children.

especially the Bread and Meat Exchanges (Lists 4 and 5), which provide approximately 70 calories per exchange.

A periodic check-up is the only way to determine whether the prescribed diet is meeting or exceeding the caloric needs of the patient. On the basis of this observation, adjustments in the caloric level of the diet may be needed.

The composition of a diabetic diet no longer

differs greatly from that of a nondiabetic. The ability of the physician to distribute the daily carbohydrate in various ways permits the physician to overcome the deficiencies of insulin preparations. The techniques of dietary education have been greatly simplified, and more education materials are available, thus aiding both the physician and the patient in the management of diabetes mellitus.

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*Please contact the Diet Therapy section chairman of the Maryland Dietetic Association of any interest in therapeutic diets. This committee is endeavoring to clarify various phases of diet therapy in this manner.*



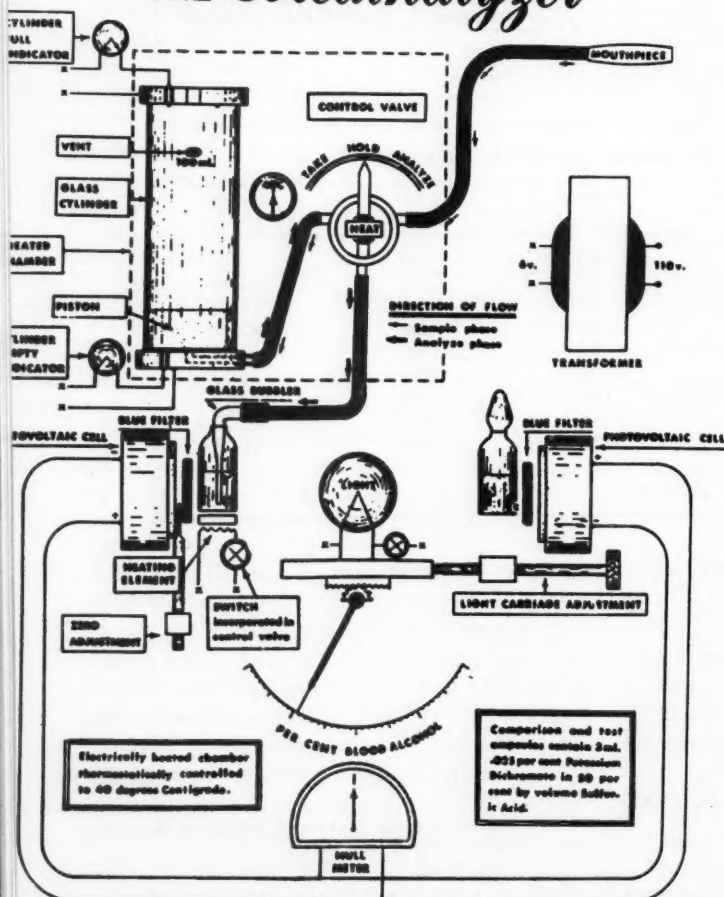
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 Judge of the Court of Common Pleas

**MEDICAL ASPECTS**  
**Henry C. Freimuth, Ph.D.**  
 Toxicologist, Office of the Chief Medical Examiner of Maryland

**ADMINISTRATIVE ASPECTS AND  
 DEMONSTRATION OF BREATHALYZER**  
**Lieutenant William V. Elliott**  
 Department of Police, Wilmington, Delaware

**LEGAL ASPECTS**  
**Theodore C. Waters, Jr., Esq.**  
 Member of the Baltimore Bar

## THE *Breathalyzer*



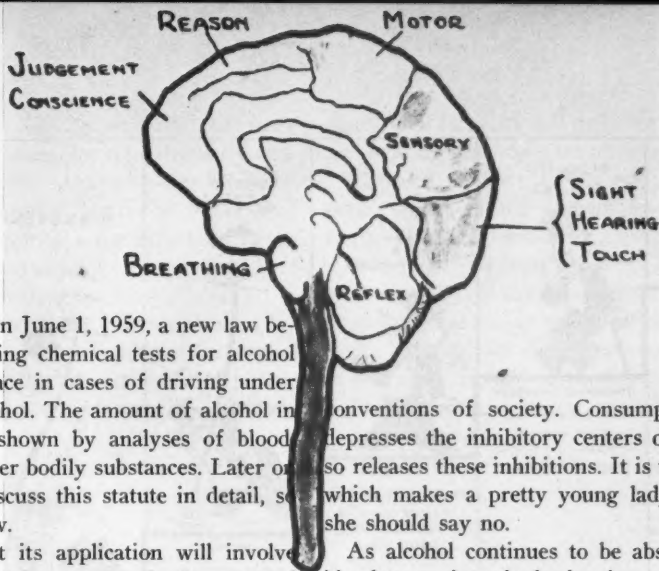
Schematic drawing of the Breathalyzer method developed by Lt. Robert F. Borkenstein of the Indiana State Police, showing the three main phases of operation. The device is contained in a lightweight portable case measuring approximately 10 in. x 12 in.

## The DRINKING DRIVER and Maryland's New Law

Medicolegal symposium held January 28, 1960. Arranged by the Joint Committee on Medicolegal Problems of the Medical and Chirurgical Faculty of the State of Maryland and the Maryland and Baltimore City Bar Association.



Fig. 1



JUDGE SODARO: On June 1, 1959, a new law became effective, making chemical tests for alcohol admissible in evidence in cases of driving under the influence of alcohol. The amount of alcohol in the blood may be shown by analyses of blood, urine, breath, or other bodily substances. Later on Mr. Waters will discuss this statute in detail, so I will not do so now.

It is evident that its application will involve medical problems of interest to the lawyer and legal problems of interest to the doctor. The law may affect anyone who declines to give up driving or cocktail parties.

Although the day-to-day application of the law will be in the hands of the lawyers, the new law is the outgrowth of proposals made in 1938 by a joint committee of the American Medical Association and the National Safety Council. The interests of the medical profession in the problem of the drinking driver is shown by the fact that three separate articles dealing with the problem have been published in the last year in the *Journal of the American Medical Association*. The interests of lawyers in the new statute is obvious.

Our first panel member is Dr. Henry C. Freimuth, who will discuss the scientific validity of the tests and the medical aspects of the matter.

DR. FREIMUTH: I think it is wise, before beginning any discussion of this, to have a brief survey of the physiology of alcohol. This is principally concerned with the effects of alcohol upon the brain centers, because this is the area which controls the individual and which demonstrates the effects of alcohol upon that person.

Figure 1 is a somewhat rough diagrammatic representation of the areas of the brain upon which alcohol would have its effect. Alcohol, of course, is a depressant, which is contrary to the popular concept that alcohol is a stimulant. It has no stimulant action whatsoever. It is essentially a nervous system depressant. The areas first affected with the initial absorption of alcohol are the areas in the frontal portion of the brain. These are the areas which are concerned with inhibition, those restrictions which make us conform to the

conventions of society. Consumption of alcohol depresses the inhibitory centers of the brain and so releases these inhibitions. It is the sort of thing which makes a pretty young lady say yes when she should say no.

As alcohol continues to be absorbed from the bloodstream into the brain, the motor areas of the brain become affected. These areas are concerned with motor response, reflexes, and balance; so the individual begins to lose equilibrium.

Finally the most primitive portion of the brain, that which is concerned with breathing, is affected. The individual may actually die of respiratory paralysis, death due to acute alcoholism.

Other areas of the brain concerned with other functions are also affected: sight, hearing, and touch—the so-called sensory areas. We know from observation that these areas are definitely affected by consumption of alcohol.

The more primitive areas are not affected until the concentration of alcohol reaches a considerable degree. The inhibitory centers, which are the first affected, are the ones which are most important in connection with motor vehicle operation. These are also the areas which are concerned with the element of judgment; that is, for example, what makes a person who has imbibed too much claim that he is a much better driver after he has been drinking than he is when completely sober. The alcohol makes him feel that he can drive closer to the ditch or to cars coming from the opposite direction. If he were sober he wouldn't dare to do that; so he insists he is a better driver when drinking.

Figure 2 is a graphic representation of the effects upon the individual of the different concentrations of alcohol in the blood, which are a measure of the concentration of alcohol in the brain. We all know that people react differently to a given consumption of alcohol. They also react differently to a definite level of alcohol concentration in the blood. This is allowed for in the

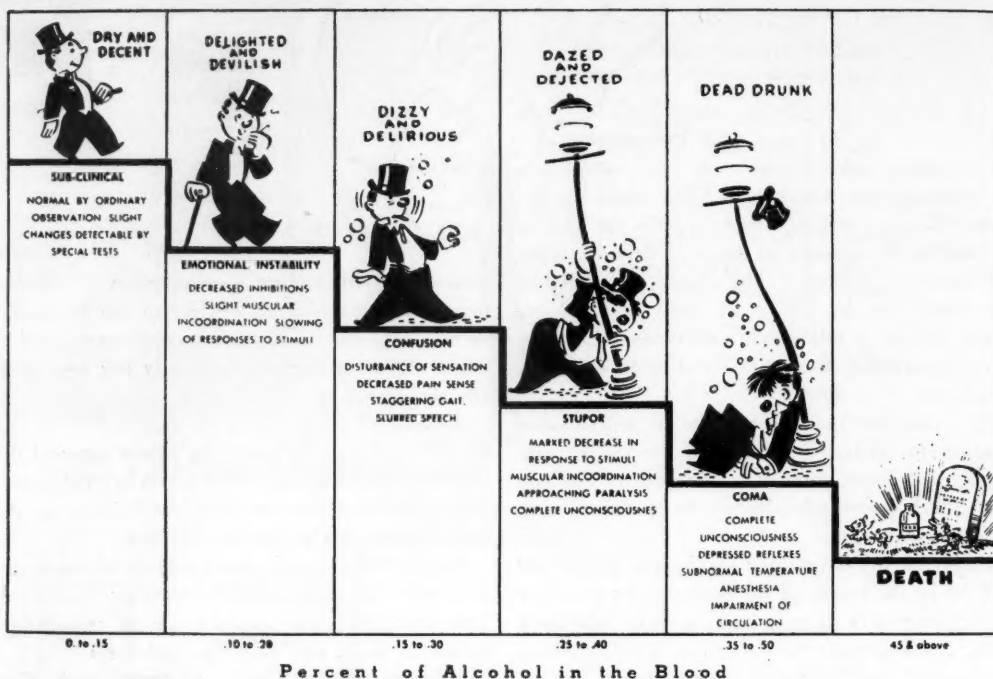


Fig. 2

illustration. Along the base line, the different levels of alcohol in the blood are depicted. You can see that there is considerable overlapping in the different zones.

I will not encroach upon Mr. Waters's territory by citing anything about the law; but, briefly, this is similar to the law which has been adopted in all the states where such legislation has been enacted.

The first zone of alcohol concentration is that below .05 per cent, in which the individual is not presumed to be under the influence of alcohol. The second zone is between .05 per cent and .15 per cent, in which there is no presumption as to his being or not being under the influence; one must have additional information. The third zone, .15 per cent and above, is prima facie evidence that the individual is under the influence of alcohol.

This .15 per cent is not a magic number arrived at by picking something out of a hat. It is based upon many, many controlled observations of individuals and determinations of the effect of alcohol consumption upon their driving ability. Many of these tests have been based upon actual road conditions of the individual driving, others

upon laboratory simulated conditions of driving. There has not been anyone found yet who, at concentrations of .15 per cent or more, could not be deemed to be under the influence of alcohol in the sense in which it is defined in motor vehicle statutes.

This does not necessarily mean that the person is blind staggering drunk. There is a definite distinction between the terms "drunkenness" and "under the influence." One may be under the influence without being drunk, but one could not be drunk without being under the influence.

To illustrate the magnitude of this problem of motor vehicle operation and alcohol consumption, I will give you some statistics on motor vehicle fatalities which we have compiled over a period of years. These statistics, as you will see, are broken down into different groups involving drivers, pedestrians, and passengers.

The question always arises as to how much one must consume in order to reach a given blood-alcohol concentration. Obviously we again run into the problem of individual variation. Some people will become obviously intoxicated on a minimal consumption, whereas others have to consume a

considerable amount before reaching the same state of behavior. One cannot state definitely how much an individual has consumed to reach a given blood-alcohol concentration, but one can state what the minimum consumption must have been in order to reach that blood-alcohol concentration. It is a matter of simple arithmetic.

If you have a given alcohol concentration in the blood, this is essentially the same as the alcohol concentration throughout the other tissues of the body; thus you can calculate, according to body

hour. That is pretty tall drinking for most people and it is a rather tolerant allowance.

This, of course, permits one to automatically refute some of the contentions encountered in traffic courts, in which the defendant always admits that he had been drinking, but he has never had any less or any more than two beers. You find an awful lot of people drinking one or two beers, and nobody drinks whisky anymore; that is the only conclusion you can reach. When an individual with a .15 per cent alcohol concentra-

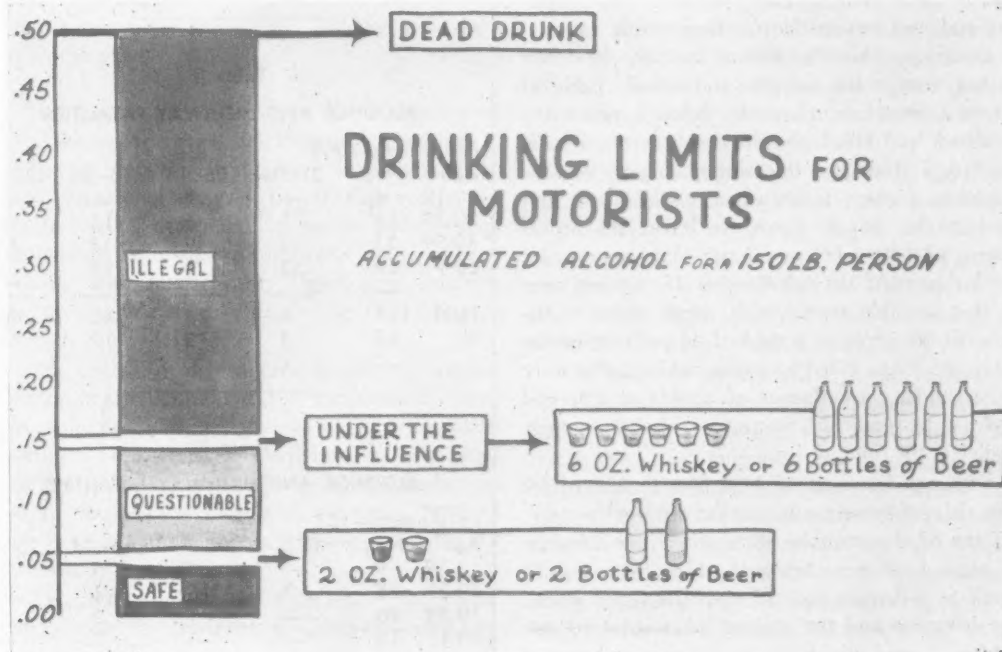


Fig. 3

weight, what the total amount of alcohol must be in the particular individual. That alcohol could be obtained only from an outside source; so you can calculate the volume of alcoholic beverage which would be equivalent to this much alcohol.

Using the mythical average man of 150 pounds, we have here the minimum amount of alcoholic beverage which would have to be consumed to reach the indicated concentration (Fig. 3). The .05 per cent, which is the so-called safe level, would require the consumption of two ounces of 100 proof whisky or two twelve-ounce bottles of beer. To reach the .15 per cent level, which is the critical level, the minimum consumption would be six ounces of whisky or six bottles of beer; but this must be consumed within approximately one

hour. That is pretty tall drinking for most people and it is a rather tolerant allowance.

The three tables give a statistical picture which I will try to summarize as briefly as possible. These 501 drivers were subjects of a five-year study in Baltimore. These were motor vehicle accidents in which the individuals died within twelve hours after sustaining their fatal injury.

In Table I are the 158 drivers of vehicles who were killed in these motor vehicle accidents. As you can see, 57 were under the influence of alcohol; that is 36 per cent of the total. Another 33 were in that in-between zone in which they might or might not have been under the influence, but

most probably were. Of course, you must take into account the fact that some of these people survived for a few hours after sustaining their fatal injury, in which case they would have lost some alcohol from their bodies. Thus their actual alcohol content at the time of injury was undoubtedly higher than would have been reflected in this study.

By adding this 33 to the original 57, we get a total of 51 per cent of drivers who had a significant amount of alcohol which may have affected, and in many cases probably did affect, their driving and was responsible for their death.

Looking at the other side of the coin, the driver is not always the culpable individual. Table II shows pedestrians. Generally when a pedestrian is struck and killed, the driver is the one who is blamed. I show you this simply to give you the complete picture rather than to load the gun against the driver. Here we have 208 pedestrians, of whom 66, or 32 per cent, were under the influence of alcohol. Another 25 per cent were in that possible zone, which, when added to the original 66, gives us a total of 44 per cent of the total pedestrians killed by motor vehicles who were either under the influence of alcohol or who had at least a significant amount of alcohol in their bodies at the time of death.

Of the pedestrians, 42 were over the age of 40. The drivers present a somewhat different picture. Of the 57 drivers who were under the influence of alcohol, 38 were below the age of 40. This, I think, is a definite indication of the social drinking behavior and the general after drinking behavior of the individuals. As the person becomes older, he is less apt to drink and drive, because he becomes more mature.

It is difficult to explain the pedestrian and drinking ratio as the age increases. There are a number of explanations for that. First of all, with the increase in years the individual's response to outside stimuli lessens. A significant amount of alcohol depresses him still further, so he cannot jump back from an oncoming vehicle or he jumps between two cars when only one car is coming.

Another possible explanation why the older fatalities are in the pedestrian group, as one of my associates facetiously suggested, is that by that time their children are driving the cars so they have to walk.

Table III shows the passengers who were killed

Table I  
ALCOHOL AND HIGHWAY FATALITIES

Drivers—158					
Age	Neg.	.01-.04	.05-.14	.15-.24	.25 up
0-19	9	1	3	2	—
20-39	24	4	23	29	7
40-59	24	—	7	13	4
60+	5	1	—	—	2
Total	62	6	33	44	13
%	39	4	21	28	8

Table II  
ALCOHOL AND HIGHWAY FATALITIES

Pedestrians—208					
Age	Neg.	.01-.04	.05-.14	.15-.24	.25 up
0-19	6	—	1	—	—
20-39	13	1	6	13	8
40-59	33	2	9	14	12
60+	59	3	9	13	6
Total	111	6	25	40	26
%	53	3	12	19	13

Table III  
ALCOHOL AND HIGHWAY FATALITIES

Passengers—135					
Age	Neg.	.01-.04	.05-.14	.15-.24	.25 up
0-19	9	—	5	5	1
20-39	28	7	16	14	9
40-59	20	—	1	3	2
60+	13	—	—	2	0
Total	70	7	22	24	12
%	52	5	16	18	9

in motor vehicle fatalities. Here we have 56 of the total of 135, or 27 per cent, under the influence of alcohol. If you add all of these figures together to produce the over-all picture of alcohol consumption in motor vehicle fatalities, 46 per cent of all persons killed, whether they be pedestrians, drivers, or passengers, had consumed significant amounts of alcohol.

I will concede that it is difficult to assess the role played by a passenger's drinking in causing the death of a passenger in a motor vehicle accident, but remember that some of the passengers reflected the conditions of the drivers, because



they were individuals who were drinking together. Then there is the other part of the picture. You can speculate that a driver who is completely sober may be conveying a passenger who is unruly because of excessive alcohol consumption; the passenger creates sufficient distraction to the driver to cause the driver to have an accident in which the passenger is killed. This is possible.

MR. PAPER: Doctor, I hate to interrupt, but how did you pick out these tests; you have so many years in between. If we take them as they are, almost everybody was drunk. Did you pick them at random?

DR. FREIMUTH: They were five hundred consecutive motor vehicle fatalities which we had in Baltimore between 1951 and 1956, in whom we could do alcohol analyses. In our office routine we do an alcohol determination on the bodies of all individuals who die within twelve hours of sustaining their fatal injury. These were just five hundred consecutive cases during that five-year period.

The method of determining the alcohol concentration in a living individual is somewhat different from the procedure we adopted in examining dead bodies. There were no restrictions to the type of sample which we might obtain in dead bodies, so we might work on the blood, the spinal fluid, or the brain. With living individuals, however, the problem is more difficult.

The law provides for analysis of the blood, which is interpreted in terms of blood-alcohol concentration. A blood sample cannot always be obtained conveniently; however, one can resort to an indirect means of determining the blood-alcohol concentration by an analysis of other body substances. That substance which is most commonly used—and the one which you will see demonstrated tonight—is the breath.

I would like to show you the type of instrument currently in use by the City of Baltimore, which will be used in the State of Maryland by the state police, for analyzing breath samples.

A direct correlation between the concentration of alcohol in the breath and that in the blood has been conclusively demonstrated. The amount of alcohol which is contained in 2100 cubic centimeters of alveolar breath air is the same as the amount of alcohol which is contained in 1 cubic

centimeter of blood. By analyzing a measured sample of alveolar breath air, determining the amount of alcohol in it, calculating it to the amount in 2100 cubic centimeters, and multiplying that by 100, one arrives at the percentage of alcohol in the blood.

Several procedures are available for analyzing breath, all producing essentially the same results. The instrument which is currently being used here is the Breathalyzer, pictured on page 288. The current model is somewhat different in outward appearance from the one pictured, but the mechanics are essentially the same. Also illustrated on page 288 is a cutaway drawing, which shows the inner workings of the instrument and explains the basic principles of operation. Later you will see the actual demonstration.

The instrument has a cylinder in it which permits the automatic collection of a measured volume of breath air. The subject simply breathes into the instrument, continuing to breathe until he cannot breathe out any longer; in other words, he must inspire again, at which point the instrument automatically collects the sample.

The basis of its operation is the reaction of ethyl alcohol with potassium dichromate in sulfuric acid. This produces a yellow solution. The tester takes two ampoules which have an equal amount of potassium dichromate in sulfuric acid. There is a light between these two ampoules which is positioned so that the amount of light passing through one vial is exactly the same as the amount of light passing through the other vial, as measured by photoelectric cells on either side of the two vials. Any difference in light intensity would be reflected by a difference in electrical current, which would be shown by this galvanometer placed down below here. When you balance out the galvanometer with the galvanometer needle at zero, the amount of light passing between the two ampoules is exactly the same.

After the sample has been collected in here, it is passed through in this direction and bubbled through this one vial. If there is any alcohol in that breath sample, it will react chemically with the potassium dichromate in this vial, converting it to a green substance, chromium sulfate.

At the end of the passage of the breath through this vial, the amount of light passing through the two ampoules is again balanced by changing the position of this light. Imbalance between the two

ampoules is immediately shown by the deflection of the galvanometer; hence, by changing the position of the light, you bring the galvanometer back to zero, at which point the light is again balanced.

As you move the light, its passage is reflected by the movement of this needle along the dial, which is calibrated in terms of percentage of alcohol in the blood, so that at the conclusion of the determination you have the direct result of concentration of alcohol in the blood.

I have mentioned here the .15 per cent level as that which has been adopted in most areas. There was a symposium held in 1958 in Bloomington, Indiana, on Alcohol and Road Traffic, which was attended by various people who had been active in this field for many, many years, both in this country and in foreign countries. They all agreed and signed a statement to the effect that it was their opinion that all individuals are adversely affected, so far as motor vehicle operation is concerned, when the concentration of alcohol in the blood reaches .10 per cent. Therefore, this .15 per cent level which we have adopted here in Maryland is a liberal one, and, I think, will not do an injustice to anyone.

JUDGE SODARO: Thank you, Dr. Freimuth.

The state and city police departments have decided to test for blood-alcohol by analyzing a subject's breath. Our next speaker will demonstrate the Breathalyzer and how it will be used. He is Lieutenant William V. Elliott, an experienced police officer who now commands the Traffic Division in Wilmington, Delaware.

Lieutenant Elliott is particularly qualified in this subject, because the State of Delaware enacted a similar law in 1956. He and his men have had the practical experience of testing drivers for the past three years.

LIEUTENANT ELLIOTT: I think Dr. Freimuth very well explained the operations of the Breathalyzer. One of the most important phases of testing a person suspected of being under the influence is to observe his condition at the time of the testing and to properly record it.

I have here the standard recognized form recommended by the National Safety Council. The City of Baltimore now uses this form and so do the State Police. It is used to record the objective symptoms of intoxication. It contains a routine

set of questions and tests that will show impairment, if that impairment is there, to alcoholic influence or, perhaps, to some other condition.

We have a volunteer who will participate in an experiment. Would he please step forward?

Observe this gentleman. He is not drunk by any means, but when I tell you what he has consumed, I am sure you will agree that he must be to some degree under the influence of alcohol. This afternoon between 3:30 P.M. and 4:30 P.M., Bill Swoboda consumed two twelve-ounce bottles of beer. Between 6:40 P.M. and 8:02 P.M., he consumed twelve ounces of 86 proof whiskey. That is more than just smelling the cork of a bottle to some. To others who imbibe rather frequently at times, this may not be too much.

I think the only effective way to demonstrate the effects of alcohol, so that everyone can see firsthand the problem that arises in determining when the person is incapable of operating an automobile efficiently, is to see this test performed. So, Bill, if you will step down here we will go through one of these tests.

Bill did not have anything to eat when he consumed this alcohol.

The first part of this test consists of asking certain questions. These questions are asked so that we have a general idea of the condition of this individual from observation. As I go through it, remember this: this is not a game. Too many people have been murdered on the highways. This test must be done in a business-like manner every time. If the officer at any time begins to laugh and joke with a person suspected of being under the influence, he is deviating from the business-like approach, which can be an extremely great hindrance in a court of law.

This man has just been brought before me by the officers who have observed him operating an automobile on the highway. First I will inform him of his constitutional rights, not by reading from a book, but through language he will understand.

Bill, will you step out here please. You are suspected of being under the influence of alcohol to such a degree that it impairs your driving ability. By this I mean that you are not capable of operating an automobile because you drank too much. Do you understand that?

MR. SWOBODA: Yes.

LIEUTENANT ELLIOTT: Do you have any objections to taking a sobriety test or a chemical test?

MR. SWOBODA: No. Not now.

LIEUTENANT ELLIOTT: Not now! Once again, these are unusual conditions.

Bill, I am going to ask you a few questions. Some of them will require a yes or no answer. Others will require an explanation. I will ask you one time. It will be clear and concise. Whatever you say in response to my question I will record. Do you understand that?

MR. SWOBODA: Yes.

Q What is your name?

A William F. Swoboda.

Q What is your address?

A 1127 Cleveland Street.

Q How old are you?

A Thirty-one.

Q What is your approximate weight?

A 187. I weighed myself today.

Q Were you operating a motor vehicle?

A Yes.

Q Where were you going?

A Well, like I say—

Q Where did you start from?

A I started from Eddy's Tavern.

Q When did you leave?

A 8:01.

LIEUTENANT ELLIOTT: Assuming that we would have a clock, a large one that could be readily observed by anyone and distinguished by any individual, I am going to ask Bill to turn around and look at the clock on the wall and tell me the time of day by the hands on that clock.

Q Look at that clock. Look at your watch, Bill, and tell me what time you have.

A 9:02.

LIEUTENANT ELLIOTT: That would be the correct time.

Q Have you been drinking?

A Yes.

Q What were you drinking?

A Whisky.

Q How much did you have to drink?

A Twelve ounces. Between 6:45 and 8:01.

Q When did you begin drinking?

A 6:45—6:40. 6:40 on the dot I started.

Q You stopped at what time?

A 8:01 I think it was.

Q Where did you do your drinking?

A Eddy's Tavern.

Q Are you ill? Are you suffering from any defects?

A No, not that I can think of.

Q Have you been to a doctor or dentist recently?

A No. But I see doctors every day here at work.

Q Are you seeing a doctor now?

A No.

Q Are you taking any medicine?

A No.

Q Do you have diabetes?

A Not that I know of.

Q Are you taking insulin?

A No.

Q Have you used a mouth wash recently?

A No. Other than the alcohol.

Q Assuming this was an accident, are you hurt?

A No.

Q Did you get a bump on the head?

A No.

Q How much sleep did you have last night?

A Well, roughly about seven and a half hours—seven hours.

Q How much sleep did you have today?

A No sleep. I worked today.

Q Have you been drinking since the time of the accident?

A I haven't had an accident—

Q We will assume you have had one.

A Yes. Sure.

Q You have been drinking since the time of the accident?

A Yes.

Q What did you have to drink since the accident?

A Well, since the accident I haven't had anything to drink. I had all to drink before the accident.

LIEUTENANT ELLIOTT: The next phase in this form has six headings under the word *Examina-*

tion. The examining officer here will draw an impression, not a conclusion by any means, only an impression of his observation of the subject being tested.

The first item is *Breath*. You are to fill this out properly.

MR. SWOBODA: Oh, yes.

LIEUTENANT ELLIOTT: I didn't ask you a question.

MR. SWOBODA: You said, "Did you fill it out?" I thought you meant what I had done.

LIEUTENANT ELLIOTT: I just said to fill this out.

MR. SWOBODA: Oh, I thought you said, "Had you?"

Q Look this way.

A I kissed my girl friend before I left.

LIEUTENANT ELLIOTT: It has here *Odor of Alcoholic Liquor*: apparently none, or faint, or moderate, or strong. I would put moderate.

*Color of Face*: apparently normal, flushed, pale, or some other. The officer doing the examining would circle one of these.

*Clothes*: orderly, mussed, soiled, disarranged, disorderly, and other. Again we would encircle the one that would be appropriate.

The next item is *Attitude*. You have many choices here. You can circle one or two or more, whichever would fit the subject at the time of the testing: *polite, cooperative, excited, indifferent, hilarious, antagonistic, talkative, cocky, carefree, combative, sleepy, insulting, and other*. Circle one or more, or all if they apply.

The next item is *Unusual Actions*: *profanity, hiccough, belching, vomiting, fighting, and other*.

The next phase of this test actually deals with the condition of the individual. This calls for him to exercise his ability to balance himself and perform various coordination feats. The first one on here is *Pupils*. This is one that is rarely recommended, because it delves into the field of medicine. How do you know when pupils are normal? How many have you tested? Do you have that medical knowledge? So this one is put on here only in the event a doctor is in the area.

The next test is *Balance*. This is important.

Bill, I am going to ask you to perform this balance test. I am going to show you once how to do it and then I will ask you to do it. Do you understand that?

MR. SWOBODA: Yes.

LIEUTENANT ELLIOTT: All right. I want you to stand erect, place your heels together, toes at a normal angle. Drop your arms to your side. Hold your head back. Close your eyes and keep them closed. Remain in that position until I tell you to do otherwise. I am paying attention to see whether or not he sways. Watch the neckline.

MR. SWOBODA: I try not to.

LIEUTENANT ELLIOTT: Note whether he obeys exactly what he was told. He should be kept in this position for anywhere from fifteen to forty-five seconds. For a few seconds he can temporarily fight off the effects of alcohol. If you notice, now the swaying is beginning.

MR. SWOBODA: That's right.

LIEUTENANT ELLIOTT: He admitted it. Okay, Bill, that is enough of that.

The next test is another test of dexterity, actually with the fingers. We will do that one later.

Let's try the walking test, Bill. I am going to show you how to do that one time; then you are on your own. What I want you to do is to walk down this aisle until I tell you to turn around and come back, and you come back the same way you went forward; but I don't want you to walk at a normal gait. I want you to place your foot down, place your heel against your toe, and walk in this manner, with your heel against your toe. All right, begin.

This would be done on a line actually marked on the floor. Watch whether or not his heel hits his toe, whether or not he loses his balance.

MR. PAPER: He's not as athletically inclined as you are.

LIEUTENANT ELLIOTT: This in itself does not say he is under the influence. It is merely an indication.

All right, turn around, Bill, and come back.

Those persons who could see his balance know



that Bill was certainly uncertain. Try it yourself, remembering now that I will neither minimize nor exaggerate his condition. I call a spade a spade, as every officer must do. I am not going to accept an explanation that I know of many people who cannot walk in that manner. The only explanation I have for this is that it is an indication; it is not conclusive evidence or proof that a person is under the influence. It is merely another indication, as were the answers to the questions that I asked, the manner in which he conducts himself, his attitude, and so forth.

The next test is a finger-to-nose test. Bill, if you will stand out here again, I will explain to you how I want you to do it. I want you to stand with your heels together, your toes at a normal angle. Raise your arms horizontally with the body. Take the first finger; that is, the index finger, of each hand. Close your eyes and touch the tip of your nose with first the right and then the left, keeping your eyes closed, three times, alternating each hand.

MR. SWOBODA: I missed that time.

LIEUTENANT ELLIOTT: Will you turn around to the audience and perform that one time; remember to keep your arms horizontal with the body.

All right, now another test: picking up coins. To pick up coins, the person is being tested for his dexterity. I have four coins here, twenty-five cents.

I am going to drop these coins on the floor. I want you to pick them up. I want you to pick up the coins with the tails showing.

MR. SWOBODA: With the tails.

LIEUTENANT ELLIOTT: Would you pick up the dime?

MR. SWOBODA: No. It's two nickels.

LIEUTENANT ELLIOTT: *Speech*. Many times we give tests like this. Repeat after me: Around the rugged rock the ragged rascal ran. Methodist Episcopal.

MR. SWOBODA: Methodist Episcopal.

LIEUTENANT ELLIOTT: What was that again?

MR. SWOBODA: What was it again to you?

LIEUTENANT ELLIOTT: These speech tests, as you can readily see, are not fair tests. They are not conclusive. They are included only to be given under certain circumstances. If a person would suspect him of not being able to speak clearly, try one; but these are not conclusive proof, and they should not be adjudged as such.

On the bottom of the form it has *Conclusion; Effects of Alcohol: apparently none, slight, obvious, extreme*. Then his *Ability to Drive: apparently fit, ability impaired, greatly impaired*.

On the back of this form there is a place for remarks. Here should be recorded apparent injuries, physical abnormalities, and so forth. If a person says, "I cannot walk this line because I have bunions on my feet and they hurt; they are sore," the police officer should not accept this as a fact. He did not perform the test, period. Under *Remarks* he then records the reason given, that he had bunions on his feet. You then ask him to show you these bunions, for he may not have them.

This concludes the test by use of the Alcoholic Influence Report Form. Many things he did or did not do correctly would give an indication that he was under the influence of some beverage, but it is not conclusive evidence that this man is under the influence to such a degree that it impairs his driving ability beyond any reasonable doubt. If you notice the way in which Bill answered some of the questions—I know these are unusual conditions tonight. However, in some phases he did proceed to rattle off to tell me a story. This happens many times, and a police officer should not make fun or laugh at any antics or remarks made by this subject.

There is not one doctor alive today, or ever was, who can positively say beyond a reasonable doubt, merely through observation, that a person is under the influence of alcohol. He can examine him, and each test that he may give the subject will indicate that he is under the influence; but he does not know beyond a reasonable doubt that the subject is under the influence of alcohol until he knows how much alcohol is in his blood. Consequently, mechanical tests came into being.

The City of Baltimore and the State of Mary-

land now use the Breathalyzer. In Delaware, we have had it for three years now, going into the fourth year, and it has proved efficient. I would like to demonstrate the use of the instrument and give Bill the test on the Breathalyzer.

Dr. Freimuth explained the operation of the instrument, so we won't go into that. I will just perform the test. Bill, would you mind stepping around here?

This check list is supplied for the use of the Breathalyzer. No one should ever, at any time, attempt to perform a test without using this check list. I have run more than six hundred tests with this instrument and never given the test without using this check list. If I record the test, I will not be embarrassed by the defense counsel if he asks me "Did you check it off?" This way I can always say, "Yes, I did."

The first is: *Gauge, open and connect test ampoule.* Unfortunately I don't see the gauge here; however, before each ampoule is placed in the instrument it will be placed in a gauge that is designed to check the volume in the ampoule. We will assume for this particular test that this has been done. I have yet to find one in all the tests I have made that was not of the correct volume.

The second step is: *Hold heat button down for one minute.* Here is the heat button. It is down. We will hold it for one minute. The purpose of this is to bring the temperature of this test ampoule up to the operating or proper temperature at which the alcohol will react with the chemical solution. One minute seems like a long time when you are waiting for it, but it must be done in this manner.

The next step is: *Turn to take, flush out, turn to analyze.* I turn the control knob to the *Take* position and flush out. I will use the atomizer. What I am doing here is flushing the instrument out so there is not any other component material or foreign matter in the instrument.

This is air going into the machine. This is done for about ten seconds.

The next step is to turn to *Analyze*. This disengages the magnet holding the piston; the piston is falling of its own weight, forcing the air through the output tube and into the ampoule.

When the piston reaches the bottom of the cylinder, it will activate a switch and the *Empty* signal light will come on, indicating that all the air has passed out of the cylinder, through the

output tube, and into the ampoule. This usually takes from thirty-five seconds to a minute and ten seconds.

Now the *Empty* signal has come on. We are ready for our next step: *When Empty signal shows (the red light), center null meter.* This instrument, known as a galvanometer, is referred to as a null meter for short. That is just what it does, nullifies everything. *Using knob at right of panel, with light on, center the null meter.*

Now everything is nullified. As Dr. Freimuth so aptly explained, the light bulb here is now in the exact center colorwise. The same amount of light is reaching this photocell as is reaching this photocell.

The next step is: *Align scale pointer with start line.* That is the instrument here. The pointer is placed at the base line, and now we are ready for the actual test. *Turn to Take.* We reverse the knob again, permitting the sample to be collected. Now, Bill, if you will blow as long as you can, and I will prompt you on. Continue to blow as long as you can.

The reason for this is to get the most closely paralleled breath with blood which is alveolar air coming from way down deep in the lungs. Blow as long as you can, Bill—a little longer. Don't hold back—as long as you can—a little longer. Continue to blow. It is important, that we get a longlong sample, a good sample of alveolar breath.

After you have taken the sample: *Turn the control knob to Analyze.* This is a repeat procedure of the flush-out. The same thing is occurring here as occurred in step number three, when we turned to *Analyze* and the air passes through into this ampoule. The difference is that there is alcohol in it, or we suspect there is.

Bill handed me a piece of paper and said he had twelve ounces of whiskey. We'll see. He showed certain symptoms of being under the influence of alcoholic beverages. Now we will find out to what degree.

The red light has come on. Now an *Empty* signal shows. *Wait one and a half minutes. Center null meter, using knob at right of panel.* I caught the time as it went by. You wait a minute and a half so the reaction will take place with the chemical composition. We have now waited one minute. In a half minute we will perform the last step that determines the percentage of blood-alcohol in Bill right now.

All right, time is up. It is 165. So this is above the .15 per cent blood-alcohol prescribed by law.

Here we have a slip of paper that is a test record. Now that we have completed the test, the pointer is depressed. It will leave an indentation on the paper to show the per cent of blood-alcohol for court record.

Okay, Bill, answer one question: Do you really think you can drive a car?

MR. SWOBODA: No, I wouldn't even attempt to drive a car.

LIEUTENANT ELLIOTT: You wouldn't?

MR. SWOBODA: No. I got drove up and I'm going to get drove home.

LIEUTENANT ELLIOTT: Thank you very much, Bill.

Ladies and gentlemen, this instrument is checked for accuracy as commanded by the court. This is an equilibrator, where a known amount of alcohol solution is prepared and is pumped through the Breathalyzer in the same manner as you would blow into it. It has a thermometer here. We know that room air pumped through an alcohol solution will give off a certain amount of alcohol, depending upon the temperature.

I have never found the instrument to be more than three-thousandths off. Of course it is always to the benefit of the subject taking the test. I believe that Bill was a good subject on this. Unusual condition would make people react differently.

One other point I would like to make is that it is up to you people, maybe through an association, maybe by your duties—whether you be an attorney, a doctor, a judge, an officer, regardless of your position in life—it is your duty as a citizen to prevent murder on the highways by persons under the influence of alcohol.

Try these tests on yourself sometime. Learn your own equivalent. Know how much to imbibe and how much you can really take of your favorite drink. Remember one thing, our job is to save lives. When we save a boy, we save a man; when we save a woman, we save a whole family. I wonder how many families will die this year. Much of it is up to you.

JUDGE SODARO: Thank you very much, Lieutenant Elliott.

As you may realize, the structure of the new law is simple, but it does involve some knotty legal problems. Zealous defense counsel will certainly attack the law from every angle. The legal aspects will be discussed by Mr. Theodore C. Waters, Jr.

MR. WATERS: In 1938, a distinguished body of medical and toxicologic experts recommended .15 per cent of the blood alcohol as the figure at and above which every person, without exception, would be unable to operate a motor vehicle safely. More than two decades later, after several years of sharp legislative controversy, the Maryland General Assembly made this recommendation the cornerstone of a new chemical test law.<sup>1</sup> In passing this legislation, Maryland aligned herself with thirty-one sister states having statutes authorizing chemical tests to aid in determining whether a motorist is under the influence of intoxicating liquor within the meaning of the motor vehicle laws.<sup>2</sup>

We are all aware of the progressively alarming role alcohol plays in modern society. In the course of a recent address in this forum, the chairman of the Committee on Alcoholism of the American Medical Association stated that the necessity for drinking has become a part of our American culture and that drunken behavior is today tolerated and accepted.<sup>3</sup>

We are equally aware of the increasing contribution alcohol makes to the slaughter on our highways. A study of 175 motor car deaths in Maryland in 1953 showed that 60 per cent of the drivers and 72 per cent of the pedestrians had been drinking.<sup>4</sup> Prior to the enactment of the new chemical test law, the only tool in the hands of prosecuting authorities and the judiciary to curb the drinking driver was the provision in our motor vehicle laws which makes it unlawful to operate a vehicle while under the influence of intoxicating liquor.

1. Chapter 769 of the Acts of 1959, effective June 1, 1959, codified as Section 100, Article 35, 1957 Annotated Code of Maryland, 1959 Cumulative Supplement. For discussions of chemical tests, see "The Compulsory Use of Chemical Tests for Alcoholic Intoxication," 14 M. L. R. 111 (1954), and "A Study of Chemical Tests for Alcoholic Intoxication," 17 M. L. R. 193 (1957).

2. Nine other states have sanctioned the use of chemical tests without statutory authority but with court approval. National Safety Council Bulletin, July 1, 1959.

3. Dr. Marvin Block, of Buffalo, January 14, 1960. Reported in *The Sun* of January 15, 1960.

4. *Accident Facts*, National Safety Council, 1955, page 53.

But what does "under the influence" really mean? Is the odor of alcohol, together with a motor vehicle violation, sufficient; or must there be slurred speech, a staggering gait and general incoherence in order to satisfy this vague statutory standard? The absence of any criteria defining this language has occasioned legitimate differences of interpretation among our jurists and a lack of uniformity in the administration of the law. Like its counterparts elsewhere, the new Maryland law was enacted in response to the pressing need for objective scientific standards whereby the degree of "influence" upon drinking drivers could be measured with accuracy.

The Maryland statute is patterned after the Uniform Vehicle Code prepared by the National Committee on Uniform Traffic Laws and Ordinances. It does not purport to alter the basic standard of guilt; i.e. "under the influence," under the motor vehicle law. On the contrary, the statute is entirely evidential in nature, in that it makes the chemical test admissible in evidence before the trier of the case, provided certain conditions are first met. Thus, the heart of the law is the language that "the amount of alcohol in the defendant's blood at the time alleged, as shown by chemical analysis of the defendant's blood, urine, breath, or other bodily substance, shall be admitted as evidence."

Once the chemical analysis of the amount of alcohol in the driver's blood, urine, or breath is before the Court, certain presumptions arise, as follows:

1. If the percentage of alcohol is .05 or less, the driver is presumed not to be under the influence.

2. If the percentage is in excess of .05 but less than .15, no presumption arises, but the percentage may be considered with other competent evidence to determine guilt or innocence.

3. If the percentage is .15 or more, the driver is presumed to be under the influence.

Bear in mind that these presumptions may be rebutted and not conclusive. They simply give the driver, or the prosecution, as the case may be, a head start at the trial. Let us suppose, for example, that the driver's blood showed .05 per cent alcohol, but the Court had before it the observation of the arresting officer that the driver staggered and was generally incoherent. While the statutory presumption favors the driver, and will, as a practical matter, subject the external

evidence of intoxication to closer judicial scrutiny, this does not preclude conviction of the driver. The converse is true, of course, for a driver whose blood alcohol is .15 per cent or above. Then, the prosecution holds the initial advantage, but the Court may have before it other competent evidence persuasive of innocence which overcomes the statutory presumption of intoxication.

The statute specifically recognizes the importance of non-chemical evidence by declaring that the admissibility of tests and the presumptions flowing therefrom do not limit the introduction of other competent evidence.

In applying the new chemical test law, our judiciary and prosecuting authorities should seriously consider the admonition of Dr. Horace E. Campbell, of Denver, that the courts and prosecutors are the weak link in preventing drunken driving.<sup>5</sup> In a recent article, Dr. Campbell charges that most courts construe the .15 per cent level as the absolute dividing line between drunken and non-drunken driving, thus treating a driver with .14 per cent of alcohol in his blood as a safe driver. According to Dr. Campbell, this is entirely fallacious, because a concentration of only .05 per cent will impair the driving ability of many persons, while virtually all drivers are affected by a concentration of .10 per cent.

He points out that the .15 per cent level, at which the presumption of intoxication arises, constitutes a concentration which no defending attorney can assail and is applicable to any person, regardless of his tolerance to alcohol and his innate resistance to its effects. But Dr. Campbell emphasizes that this does not mean that all persons can operate a vehicle safely at .14 per cent, suggesting that probably only one person out of a million could drive with safety at this level. The burden of his criticism is that there is nothing sacrosanct or hallowed about the .15 per cent level. He urges prosecutors and courts to recognize that drivers with concentrations of alcohol below this level may be as great a menace as those above.

Admissibility of the chemical analysis is subject to several significant restrictions, as follows:

1. The specimen of the blood, breath, or urine

5. *American Bar Association Journal*, Vol. 46, Number 1, January, 1960, Dr. Campbell is Vice Chairman of the American Medical Association's Committee on Medical Aspects of Automobile Injuries and Deaths.



must be taken within two hours from the time the driver was first apprehended. This restriction reflects the medical requirement that the test, to be accurate, must be taken within a limited period of time after arrest.

2. Only a physician, or qualified medical personnel, acting at the request of a police officer, or a person acting at the request of a physician, can withdraw blood for test purposes. This restricts the act of blood withdrawal to competent and qualified persons, as it should be, and would presumably include laboratory technicians.

3. The driver is entitled to have a physician of his own choice administer the test, in addition to the police test, as a check against that conducted by police authorities.

4. Upon request, the driver is entitled, prior to trial, to an official certificate setting forth the results of the police test.

5. The driver's consent to the test is an indispensable condition of the test's admissibility in evidence. Should the driver refuse to submit to the test, no presumption or inference arises; and the fact of his refusal is not admissible at the trial.

Thus you see that the driver is vested with certain protective rights, which must be scrupulously respected. The most important condition imposed by the statute, of course, is that the test can only be administered with the driver's consent. I am of the view that this is the weakness in the law, believing as I do that the problem presented by the drinking driver is so serious as to call for a compulsory test or suspension of the driver's license upon his refusal to submit to the test. In this regard, I would favor a law similar to that adopted by Kansas, which declares that any driver who operates a motor vehicle on the highways of that state shall be deemed to have given his consent to a chemical test, and if, after arrest for driving under the influence, the arresting officer has reasonable grounds for the arrest and the driver refuses to submit to the test, the arresting officer must report the driver's refusal to the proper official, who shall suspend the operator's permit.<sup>6</sup> While the Maryland law represents concrete progress, I am hopeful that the General Assembly will favorably consider elimination of the consent provision.

In addition to the chemical test law, the Gen-

6. Kansas General Statutes, 1949 (Supp. 1955). Section 8-1001 through 8-1007.

eral Assembly has also enacted a point system for the suspension and revocation of licenses, which becomes effective December 1, 1960.<sup>7</sup> Under this law, a conviction for driving under the influence carries an assessment of twelve points, the highest assessment figure. Where twelve points are assessed, the Commission is required to revoke the driver's license, unless revocation would adversely affect the employment or opportunity for employment of the driver, in which case the Commissioner is authorized not to revoke the license. If the driver is required to operate a vehicle in the course of his regular employment, revocation requires eighteen points. The point system marks a significant advance in our motor vehicle laws. If forcefully administered, it should improve the quality of the driving public.

A statute of this character inevitably involves a collision between the rights of the community in the form of its police powers, on the one hand, and the rights of the individual in the form of constitutional prohibitions against unlawful search and seizure, self-incrimination, and deprivation of liberty without due process of law, on the other.<sup>8</sup> Because our statute, as it presently stands, is predicated upon the consent of the driver, there is no constitutional problem, since the act of consent would operate as a waiver of these rights. But what about compulsory tests? The Supreme Court has decided two cases which bear upon this question.

The first is the *Rochin* case, decided in 1952.<sup>9</sup> Three Los Angeles deputy sheriffs, acting upon information that Rochin was selling narcotics, entered Rochin's house through an open front door and forced open the door to his room on the second floor. They found Rochin sitting partly dressed on the side of his bed and spied two capsules on the night stand. When asked what the capsules were, Rochin seized the capsules and put them in his mouth. A struggle ensued, in the course of which the sheriffs tried to extract the capsules without success. Rochin was then handcuffed and taken to a hospital, where a doctor, at the direction of one of the officers, pumped out his stomach and produced

7. Chapter 736 of the Acts of 1959, codified as Section 114A, Article 66½, 1957 Annotated Code of Maryland, 1959 Cumulative Supplement.

8. For a discussion of the self-incrimination, search and seizure, and due process aspects of chemical test laws, see 17 M. L. R. 208-216.

9. *Rochin vs. California*, 342 U. S. 165.

the two capsules, which were proved to contain morphine.

On these facts, the Supreme Court concluded that the conviction violated Rochin's due process rights in that the methods employed offended a "sense of justice." In speaking for the majority, Justice Frankfurter stated that the conduct of the sheriffs shocked the conscience, offended even hardened sensibilities, and was too close to the rack and the screw to be permitted.

The second and more pertinent ruling is the Supreme Court's recent decision in the *Breithaupt* case,<sup>10</sup> in which a driver, while operating a pickup truck on the highways of New Mexico, was involved in a collision with a passenger car. Three occupants of the car were killed, and the driver of the truck was seriously injured. A pint whiskey bottle, almost empty, was found in the glove compartment of the truck. The truck driver was taken to a hospital. While he was lying unconscious in the emergency room, the smell of liquor was detected on his breath. A state patrolman requested that a sample of his blood be taken, and a physician withdrew a sample while the driver was unconscious. Subsequent laboratory analysis showed that the blood contained .17 per cent alcohol.

In the course of the trial of the driver on the charge of manslaughter, the blood test, together with expert testimony that the driver was under the influence, were admitted in evidence. Upon this background, the Supreme Court held that the driver's conviction did not violate his due process rights. In distinguishing the *Rochin* case, the majority of the Court, through Justice Clark, reasoned as follows: (352 U.S. 435-440)

*Basically, the distinction rests on the fact that there is nothing "brutal" or "offensive" in the taking of a sample of blood when done, as in this case, under the protective eye of a physician. To be sure, the driver here was unconscious when the blood was taken, but the absence of conscious consent, without more, does not necessarily render the taking a violation of a constitutional right; and certainly the test as administered here would not be considered offensive by even the most delicate. Furthermore, due process is not measured by the yardstick of personal reaction . . . of the most sensitive person,*

*but by that whole community sense of "decency and fairness" that has been woven by common experience into the fabric of acceptable conduct . . . The blood test procedure has become routine in our everyday life. It is a ritual for those going into the military service, as well as those applying for marriage licenses. Many colleges require such tests before permitting entrance, and literally millions of us have voluntarily gone through the same, though a longer, routine in becoming blood donors. Likewise, we note that a majority of our states have either enacted statutes in some form authorizing tests of this nature or permit findings so obtained to be admitted in evidence. We therefore conclude that a blood test taken by a skilled technician is not such "conduct that shocks the conscience," . . . nor such a method of obtaining evidence that it offends a "sense of justice." This is not to say that the indiscriminate taking of blood under different conditions or by those not competent to do so may not amount to such "brutality" as would come under the Rochin rule. . . .*

*The test upheld here is not attacked on the ground of any basic deficiency or of injudicious application, but admittedly is a scientifically accurate method of detecting alcoholic content in the blood, thus furnishing an exact measure upon which to base a decision as to intoxication. Modern community living requires modern scientific methods of crime detection lest the public go unprotected. The increasing slaughter on our highways, most of which should be avoidable, now reaches the astounding figures only heard of on the battlefield. The States, through safety measures, modern scientific methods, and strict enforcement of traffic laws, are using all reasonable means to make automobile driving less dangerous.*

*As against the right of an individual that his person be held inviolable, even against so slight an intrusion as is involved in applying a blood test of the kind to which millions of Americans submit as a matter of course nearly every day, must be set the interests of society in the scientific determination of intoxication, one of the great causes of the mortal hazards of the road. And the*

10. *Breithaupt vs. Abram*, 352 U. S. 432.

more so since the test likewise may establish innocence, thus affording protection against the treachery of judgment based on one or more of the senses. Furthermore, since our criminal law is to no small extent justified by the assumption of deterrence, the individual's right to immunity from such invasion of the body, as is involved in a properly safeguarded blood test, is far outweighed by the value of its deterrent effect due to public realization that the issue of driving while under the influence of alcohol can often by this method be taken out of the confusion of conflicting contentions.

The Court minority (Warren, Black and Douglas) found no justifiable distinction between forcefully applying a stomach pump and drawing blood from an unconscious driver. Chief Justice Warren conceived due process as meaning that law enforcement officers, in their efforts to obtain evidence from persons suspected of crime, must stop short of bruising the body, breaking skin, puncturing tissue, or extracting body fluids, whether by force or by stealth. In any event, the decision stands for the proposition that an involuntary blood test is secure from challenge as a violation of the driver's due process rights and that in balancing the right of the community to safe highways as against the right of the drinking driver to immunity from blood tests, the right of the community must prevail.

Several incidental questions arise which require comment. Let us suppose that objection is made to the introduction in evidence of a physician's testimony as to the result of a blood test, on the ground that this evidence is within the principle of privileged communication between physician and patient. The cases generally hold that the physician's testimony does not fall within the privilege, the theory being that the information developed by the test is not necessary to enable the physician to properly treat the patient.<sup>11</sup>

The question also arises as to the extent to which force may be used to obtain a breath specimen, under statutes which make the test compulsory. In one case, the police placed the driver in restraining straps and forcefully held his head while administering the test. The Court held that

the result of the test was admissible, as long as the force is used in capturing exhaled breath after it passes the lips or nose of the driver.<sup>12</sup>

Finally, the contention may be made that the driver was so intoxicated at the time of the test that he could not be said to have consented to its use. The Courts have held that intoxication does not affect the voluntariness of his consent.<sup>13</sup>

By the enactment of the chemical test law and the companion point system, the General Assembly has taken a significant forward step in removing the drinking driver from our highways. The burden is now cast upon our prosecuting authorities, judiciary, and the Department of Motor Vehicles to see to it that these laws are wisely and strictly enforced.

JUDGE SODARO: Thank you very much.

We have some prepared questions that we would like to put to our panelists. This, of course, does not preclude your asking questions, which you may present later. I will put the first question to Lieutenant Elliott. Lieutenant, can the test ampoule be used for more than one test?

LIEUTENANT ELLIOTT: It can, yes. It has been used up to as many as four tests; however, it isn't recommended, because it carries more weight if you use a new ampoule with distinction for each test.

JUDGE SODARO: Your second question: Can the test ampoule be preserved so it can be analyzed by a chemist?

LIEUTENANT ELLIOTT: It can be preserved by placing a sealing wax over the ampoule. This would do a chemist no good, however, because we are not concerned with the constant concentration of dichromate. It could be ten per cent, too weak or too strong, and would not affect the answer. If you knew the density of the color prior to the test, then of course it would be of value. But because we don't know that, and since the instrument nullifies everything during the test, it is of no value to the chemist or the attorney.

JUDGE SODARO: Your last question, and then you will be cross-examined by the audience: What success have you had in Delaware in prosecuting drivers whose blood alcohol is below .15 per cent?

11. *Richter vs. Hoglund*, 132 F. 2d 748 (7 Cir. 1943); *Schwartz vs. Schneuriger*, 69 N.W. 2d 756 (Wis. 1955).

12. *State vs. Berg*, 259 P. 2d 261 (Ariz. 1953).

13. *Holloway vs. State*, 175 S.W. 2d 258 (Tex. 1943).

LIEUTENANT ELLIOTT: These are the most difficult people to apprehend. It is easy to recognize the person who has imbibed too freely and has an excessive amount of alcohol in his system. But picture a person with less than .15; sometimes these are more difficult.

We have been fortunate in Delaware; we have had excellent success. With those we have taken into court with readings of .12, .13, .14, we have gotten five convictions out of seven cases. The other two were dismissed.

JUDGE SODARO: Thank you very much, Lieutenant.

We will turn now to Dr. Freimuth. We have four prepared questions. Doctor, suppose you stand up here with me and we can use this microphone together.

The first question: How many different methods of breath testing are available, and is there any variation in the results obtained by each.

DR. FREIMUTH: There are several methods. There is one instrument which is known as a Drunkometer, which is the oldest one, dating back to 1937. Then there is the Breathalyzer, which is one of the more recent ones. In addition, there is an automatic device known as the Alcometer, and a portable device called the Intoximeter. There is also an automatic Intoximeter. That gives us five different methods. They all give comparable results. They have all been compared with analyses performed on various instruments on the same subject, and the results agree within a hundredth of a per cent, which is well within the analytical error of the method.

JUDGE SODARO: Your second question: How can we use the blood-alcohol concentration as an indication of intoxication when we know that one person may be affected much more than another with an equal intake of alcohol?

DR. FREIMUTH: This is a problem which commonly crops up in the courtrooms. Actually, as I mentioned during the formal presentation, what we are measuring is the amount of alcohol absorbed, not the amount of alcohol which has been consumed. Although one person will reach the .15 per cent level, let us say, with a consumption of the absolute minimum of six ounces of 100 proof whisky, and the second person might re-

quire nine ounces of 100 proof whisky to reach that same .15 per cent level, when they both reach the .15 per cent level, they are both under the influence of alcohol.

JUDGE SODARO: Your third question: How much success do you believe police authorities will have in obtaining the consent of drivers to the test?

DR. FREIMUTH: I don't think there will be any difficulty, just on the basis of past experience. The more intoxicated the individual is, the more willing he generally is to consent, because it is a dare, a challenge. He is sure he is sober, so he is going to insist on it. We have had numerous instances where people have actually requested the test to prove they were not under the influence, and they were drunker than hoot owls.

JUDGE SODARO: Your last question: In the event urine samples are to be used for evaluating blood-alcohol, what precautions must be taken to insure that the results are dependable in terms of estimating alcohol at the time of apprehension of a suspect?

DR. FREIMUTH: This is an important factor. The law provides for the determination of a blood-alcohol concentration, as was pointed out by Mr. Waters, from an analysis of the blood, the urine, the breath, or other bodily substances. Unfortunately, the law does not further spell out what has to be done in handling urine samples, and errors can occur.

If the individual is simply requested to empty his bladder, and that is analyzed, the interpretation of the results of the alcohol concentration in that urine, insofar as effect of that alcohol upon the individual is concerned, is suspect, because what you are working on when you determine the blood-alcohol concentration from urine-alcohol concentration is a ratio which exists between the alcohol in the urine as it is being formed to the alcohol concentration in the blood. This ratio is 1.3:1; that is, the urine-alcohol concentration in the urine being formed is one and three-tenths times higher than the blood-alcohol concentration. But this does not hold true with the bladder urine.

If, for example, an individual were to consume a considerable amount of alcohol right now and were not to empty his bladder for six or seven hours, at the end of that six or seven-hour period



he may be completely sober, but you would find a lot of alcohol in his urine. The precaution which must be observed is to have the subject empty his bladder first, wait a half hour, then collect the second urine sample and analyze the two urine samples.

JUDGE SODARO: Thank you very much, Dr. Freimuth.

We have just one question for Mr. Waters.

Mr. Waters, does a doctor face any risk of being sued if he collects a blood specimen for blood typing from an injured man who might need a transfusion but turns over part of the specimen to a law enforcement agent for chemical testing without informing the subject that he did so?

Do you understand the question?

MR. WATERS: Yes, I believe I do. The question in substance, as I understand it, is this: A doctor is called to the scene of an accident to treat an injured driver and feels that in order properly to treat the driver, a blood transfusion is necessary.

In order to transfuse, he must take a blood sample. Part of the sample is turned over to the police, who in turn do a chemical analysis, and the analysis is thereafter presented in court. The question is whether the doctor, under these circumstances, runs the risk of a lawsuit, on the theory that he has violated the patient-doctor relationship.

This is a nice question, and one that is not entirely free from doubt. My own feeling, however, is that since that part of the blood used for chemical analysis is unnecessary to treatment, a doctor would not be liable for a breach of his relationship with the patient.

JUDGE SODARO: Mr. Waters, every doctor in this audience and in Maryland thanks you very much for your opinion.

MR. WATERS: I might say one thing further, Judge Sodaro. In Maryland, the test is predicated upon the consent of the driver, so I don't think this question could arise in Maryland.

*Financial Aid for Mental Health Training in the South*, a publication listing grants, stipends, fellowships, and scholarships for training in the mental health professions available in the southern region, was released recently by the Southern Regional Education Board.

Professions included in four major sections of the brochure are psychiatry, psychology, social work, and nursing. A fifth section includes related professions: occupational therapy, vocational rehabilitation, school social work, school psychology, chaplaincy, sociology, neurology, and music therapy.

The current publication is a revised and expanded version of an earlier compilation published in 1957. Data included in the booklet were requested from and reported by commissioners of mental health in the region and persons responsible for the awards in the agencies and institutions listed.

The booklet is free to interested persons in the region and costs \$1.00 outside of the region.

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## MAURICE C. PINCOFFS, M.D.

August 6, 1886—December 8, 1960

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*ON December 8, 1960, the Maryland community lost its outstanding physician when, after a brief illness, the long and distinguished career of Maurice C. Pincoffs came to an untimely end. So extensive was his influence throughout the state among physicians and professional and civic groups, that all feel and share the impact of this loss. Seldom have we in Maryland profited so richly from the accomplishments of one man and witnessed such unstinting selfless devotion to the welfare of others.*

*Born in Chicago, Illinois, in 1886, Doctor Pincoffs received part of his early education in Belgium. Later he entered the University of Chicago and*

was awarded his Bachelor of Science degree in 1906. From 1906 to 1909, he was enrolled as a student in the Rush Medical College. After a year of graduate work in the Department of Anatomy, University of Chicago, he gained admission to the Johns Hopkins School of Medicine as a third year student. After graduation in 1912, he served his internship at the Presbyterian Hospital in Chicago. He returned to Baltimore for training as assistant resident physician at the City Hospital, then known as "Bay View." For two years he was medical resident on a newly organized medical service under Thomas R. Boggs, M.D. During this time the surgical service was directed by Arthur M. Shipley, M.D., and an association between these able clinicians began which was to continue until mid-century.

In 1915, Doctor Pincoffs became associated in private practice with Lewellys F. Barker, M.D., and devoted half of his time to working on hormonal problems with John J. Abel, M.D., in the Department of Pharmacology of the Johns Hopkins School of Medicine. This activity was interrupted abruptly in the spring of 1917, when Doctor Pincoffs, who held a reserve commission in the Medical Corps, was ordered to France.

After World War I, Doctor Pincoffs returned to Baltimore and married Miss Katherine B. Randall. Through their many happy years together, the love and warmth of their family circle were to provide him the necessary solace and respite from his arduous duties.

He resumed his association with Doctor Barker and served as a part time instructor in clinical medicine on the Hopkins staff. In 1921, at the invitation of Gordon Wilson, M.D., he accepted the post of professor of medicine at the University of Maryland School of Medicine. During the years 1922 to 1954, Doctor Pincoffs headed the Department of Medicine there. This was a time when the country was witnessing extensive scientific developments and unprecedented discoveries. His excellent qualities of leadership and unerring ability as a clinician and teacher provided the foundation necessary for organizing and developing a Department of Medicine in the growing school. By virtue of this influence, other departments adopted his standards and were thereby strengthened.

An inspiring teacher, he imparted a sense of

responsibility and meticulous attention to thoroughness to those many students and physicians who were privileged to study under him. For him, a medical diagnosis was never one of hasty judgment, but rather a painstaking analysis designed for the particular difficult clinical problem at hand. These natural characteristics were strengthened by his unusual ability to retain information gleaned from the medical literature. Doctor Pincoffs always practiced and taught the principles of comprehensive medicine, emphasizing the ecology of disease. With unselfish devotion, it was his basic tenet to place the patient's problem foremost, before all other considerations. He was an inspiration to his own patients, who felt implicit confidence in his judgment.

Doctor Pincoffs retired as chairman of the Medical Department in 1954. He then turned his interests to the social and medical problems in a changing environment and organized a new Department of Preventive Medicine and Rehabilitation, which he headed until 1957, when he retired from teaching and became emeritus professor. On the occasion of his retirement, the faculty of the University of Maryland School of Medicine, his friends, and his former patients honored him with a testimonial dinner and announced the establishment of a lectureship and fellowship in his name. In his honor distinguished educators speak to Baltimore audiences; and promising medical candidates who demonstrate the highest standards in character and medical ability will be appointed fellows and provided a means to develop as physicians and scholars.

Doctor Pincoffs contributed extensively to the medical school, enhancing its prestige through his teachings, clinical studies, and medical writings. He was the gifted author of many significant medical publications dealing with the natural history of disease and with the physiologic phenomena related to the adrenal gland and hypertension, functional and structural abnormalities of the heart, disorders of the nervous system, and specific treatment of acute infectious diseases.

Doctor Pincoffs made outstanding contributions during each of the great world wars. Awards for distinguished service and indomitable courage were given him because of personal participation in the evacuation of wounded from the battlefields in France in 1917 and for the high morale



which he maintained among subordinates. During World War II, in spite of increasing years, he organized the 42nd General Hospital Unit representing the University of Maryland School of Medicine in the United States Army. Later, he held posts of high responsibility in the Pacific theater, initially as the commanding officer of the 42nd General Hospital and subsequently as chief of preventive medicine for the Commanding General. Prevention of illness among American forces in the disease ridden tropical environment of the Southwest Pacific received his skilled attention. He planned and personally participated in a field study which demonstrated conclusively, for the first time, that Atabrine® was a most effective antimalarial agent if taken daily. In the ravaged city of Manila, upon re-entry of American troops in 1945, Doctor Pincoffs organized and conducted a health program which soon re-established order from chaos. The harassed population soon gained confidence in its new medical administration.

Health problems in Maryland received his tireless attention. As a senior consultant with the health departments of Maryland and Baltimore, he contributed mature advice and assisted in community health matters with infinite care and vision. Appointed to the State Board of Health by Governor Herbert R. O'Connor in 1940, he served continuously on that body until 1959. In this important capacity he assisted in monitoring the needs of the State of Maryland in vital matters pertaining to both treatment and prevention of illness. Doctor Pincoffs, as chairman of the Committee on Medical Care of the Maryland State Planning Commission, fostered a program which is a pioneer project of its kind in the United States. At a critical period following World War II, he was chosen by the Board of Regents of the University of Maryland to formulate plans for the school's future and to assist in attracting key personnel to the Baltimore faculty. Contributions to our nation's health continued through his counseling as a senior consultant to the armed forces and the Public Health Service.

As a respected member of numerous leading medical societies, he was elected to the presidencies of the Medical and Chirurgical Faculty of the State of Maryland, the American Clinical

and Climatological Association, and the American College of Physicians. Under his editorship, beginning in 1933, the *Annals of Internal Medicine* became one of the leading medical periodicals in the world.

Doctor Pincoffs commanded the full respect of everyone in his presence. In any group, he was recognized as the tall, erect, handsome man of stately bearing and gentlemanly manner. Reserved in demeanor with excellent choice of words, he had an uncanny ability to express himself precisely and with remarkable clarity. Intimate friends recall his talent for vivid expression and his warm, friendly humor. With all of his rich endowments, he was modest and unassuming.

When problems demanded careful reflection, and such situations were not infrequent for him, his approach was deliberate and meticulous in every detail. He brought sound judgment to professional discussions, since he would invariably reach the heart of a problem and carry it to its most logical conclusion. Once his mind had been made up, it was rare indeed to shake him from his position.

Another challenge to Doctor Pincoffs was his zest for outdoor life, which provided him necessary diversion and an opportunity to associate with his friends. During recess from college, he toured the midwest and camped in the rough for extended periods. On one occasion he contracted a near-fatal virus disease which he thought to be Colorado tick fever. Fishing with medical associates was another outlet; painting outdoor scenes held his interest in later years. Sailing was undoubtedly his greatest outdoor pleasure, and his nautical associates dubbed him "Master of the Wheel." This interest began seriously while he was a house officer at the Baltimore City Hospitals. The waters of the Chesapeake Bay were well known to him, and he enjoyed many cruises in the company of his colleagues. During recent years, Dr. and Mrs. Pincoffs acquired a summer home at Gibson Island, which enabled them to enjoy the company of their children and grandchildren and to be near the Bay should a brisk wind prevail.

The medical profession will remember Maurice C. Pincoffs as one of Maryland's foremost medi-

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cal teachers, clinicians, counselors, and medical administrators whose mind and labors shaped and were shaped by an era of almost ceaseless medical progress. Both of the medical schools in the city can look with pride upon his life accomplishments, since he was a distinguished alumnus of the Hopkins and the most distinguished faculty member of the University of Maryland. In addition to his unusual talents upon which the writer has chosen to focus, Doctor Pincoffs will be remembered as a modest humanitarian and a cultured gentleman.

To his gracious wife, Mrs. Katherine R. Pincoffs, and to his three children, Mr. Maurice C. Pincoffs, Jr., Mrs. J. Royall Tippet, Jr., and Mr. Peter H. Pincoffs, who survive him, the physicians of this state tender their profound sympathy and heartfelt gratitude for having had the privilege of knowing him and of having been enriched through the teachings and the accomplishments of this great physician.

Theodore E. Woodward, M.D.

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## MEDICAL ASSISTANCE TO THE AGED

Maryland's Medical Assistance to the Aged program began June 1. Residents 65 years and over who do not already receive public assistance through the State Medical Care Program may be eligible for free medical care under the terms of the Kerr-Mills Law. The program is being administered by the health departments in the twenty-three counties and Baltimore City.

Eligibility is based on an income scale. Scales start at \$1,140 for one person in metropolitan areas (Allegany, Anne Arundel, Baltimore, Montgomery, and Prince George's Counties and Baltimore City) and at \$1,080 elsewhere in the state. To be eligible, a person must have an annual income lower than the established scale and be without other resources with which to pay for medical care.

A person's home or residence is not considered a resource.

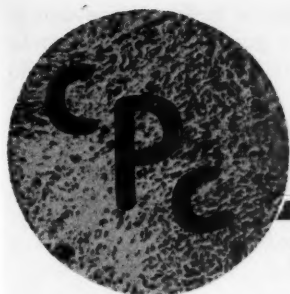
Any Maryland resident who qualifies by age and income may apply to his local welfare department. If found eligible, he is is-

sued a certificate to the local health department, which in turn, will issue him a Medical Care card good for one year. He may be recertified annually as long as he remains eligible.

With the Medical Care card, a person may be attended by the physician of his choice, either in the physician's office or in his own home. He may also receive general hospital care, prescribed drugs, limited dental care, and eyeglasses for postoperative cataract cases. Diagnostic examinations, consultation services, if required by his doctor, and special treatment services will be available at the medical care clinics in hospitals.

Under the MAA program, the physician will be reimbursed \$2 for an office visit, \$3 for a daytime home visit, and \$4 for a night call.

Maryland is the eighth state to broaden its medical care coverage for needy aged citizens. Approximately eight thousand more Marylanders are now eligible for free medical care. Half of the additional cost to the state will be paid by the Federal Government.



Theodore E. Woodward, M.D., and Harlan I. Firminger, M.D.

DR. WOODWARD: This discussion will have an element of uncertainty, at least for me, because of my bad record with Dr. Firminger; moreover, on viewing the patient's x-ray I changed my whole manner of thinking. Undoubtedly, several good rules pertaining to a clinical pathological discussion will be broken; one that I will probably not hold to my initial clinical impression and the second that I will probably take a chance on an unorthodox answer, since convention is not the rule for pathologists who select cases for such conferences.

This is a good clinical case, one that can be discussed without laboratory aids; actually, few laboratory aids are provided. I'll read the history because the audience has not had an opportunity to study it; and this case record does take study.

The patient, a Negro, aged 54, entered the hospital about three weeks before death because of dyspnea and lethargy, although the complaints are of long standing. The patient was delirious; hence, the historian had to rely upon the family. Presumably, twenty years previously he had heart disease and pain when reclining. There was associated dizziness.

Nine years later he experienced another episode. The blood pressure was 220/80. He was said to have aortic, systolic, and diastolic murmurs and a Corrigan or water-hammer pulse. This certainly suggests syphilitic aortitis. Later we find that he no longer had a diastolic murmur. It is unusual to encounter a patient with overt luetic aortitis who survives four, five, or six years unless he happened to have

been detected and treated at a time when reversibility was possible.

He was treated with the ordinary antiscaric measures. A year before hospitalization, he was given a digitalis derivative. He became edematous three weeks before his final episode. Digitoxin, aminophyllin and phenobarbital were administered. The edema regressed, but he developed increasing dyspnea and orthopnea. Lethargy progressed to a semistuporous state. The oral intake was poor. At this point we might incriminate the myocardium and not forget the endocardium. We must consider the old aortic insufficiency and consider that a murmur was missed. We'll hear about the blood pressure in a minute. Pericardial involvement must be considered, including a process that prevented venous return, leading to an inadequate cardiac output. There was no history of chest pain, the chief complaint being dyspnea, but the patient did not complain a great deal.

This man was a stevedore and a porter. I've wondered whether his occupation was related to the illness, inasmuch as the roentgenogram reveals diffuse fibrosis of the lungs. Did his occupation place him in an atmosphere of dust? Pneumoconiosis or silicosis develops when man is exposed to particles of about one micron in size which readily reach the alveoli. Silicosis does not develop after modest exposure but after some time; however, we lack that history. He stopped working because of heart trouble.

He contracted gonorrhea and swollen knee joints in youth, so obviously he might have contracted syphilis. Later we are told of three negative serologic tests for syphilis. He

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smoked and drank heartily. There was no significant history of illness in the family. On admission, he was well developed, delirious, and showed evidence of weight loss. He had respiratory difficulty, with 40 respirations per minute. The pulse was 160 and irregular. The irregularity may have been caused by myocardial involvement, which we must consider as part of the illness, or it could have been a sequel to treatment. When electrolytes, including potassium, are depleted, cardiac irregularity develops; digitalis itself may provoke irregularity.

The blood pressure at this point was 160/110, which is unusual for established luetic aortitis. Conceivably, if he had luetic aortitis and then developed cardiac failure terminally, he could lift the diastolic as well as the systolic pressure. Actually he lifted his diastolic pressure and lowered his systolic pressure. We are left with a narrow pulse pressure that could represent syphilis of the aorta, but I am not satisfied with this.

The rectal temperature ranged from 101.8 to 103. Dr. Firminger allowed me a brief glance at the temperature graph, since I wished to observe the nature of the febrile curve. The patient had remittent fever during the four days of hospitalization. The fever was higher than is usually observed in patients with chronic passive congestion. Temperature elevation occurs in heart failure, but not ordinarily to that degree. Thus, other possibilities must be entertained.

There was no cyanosis or icterus. The head and neck were normal. The thyroid was not palpable. There was no venous distention.

Two parts of the clinical record required some clarification. The results of the tuberculin test are not known. Moreover, Dr. Firminger and the attending physicians insist that venous congestion of the cervical veins was not a significant clinical feature. This makes interpretation difficult and is a disturbing feature.

The chest expanded well, without lag. The lungs were resonant, and there were basilar rales. The cardiac impulse was 2 to 3 centimeters beyond the midclavicular line in the fifth interspace. The heart was huge. The aortic and pulmonic diastolic sounds were unremarkable. A gallop was present. Gallop rhythm

indicates a heart that is under duress and is failing. There was a grade I blowing systolic murmur on the left sternal border but no diastolic murmur or thrills.

A quotation of Dr. Henry Christian seems appropriate: "We at times amuse ourselves at the bedside with murmurs and we think at times if we don't have murmurs that we don't have heart disease; and sometimes if we do have murmurs, then we have to have heart disease. American physicians still seem so obsessed by the idea of the importance of murmurs, that it is difficult for them to admit a cardiac failure without murmurs and equally difficult for them to recognize that an anatomical normal heart may show a systolic murmur." Our patient had heart disease, but the point I wish to make is that the presence or absence of the murmur or the character of the murmur is just one facet of the disease process. We must appraise the entire clinical picture and ignore the character of the murmur per se. Unfortunately, we seem to have misplaced a diastolic murmur.

The abdomen was flat with diffuse guarding. The liver extended several centimeters below the right costal margin. Cardiac cirrhosis in patients with decompensation is said to result from back pressure, the effects beginning around the central hepatic vein. It has been emphasized recently that hepatic difficulties in such patients may result from a compromised circulation, which leads to inadequate blood supply to the central area of the hepatic lobule.

There were no abdominal masses. The prostate was slightly enlarged. A small hydrocele was present. Clubbing of the nails suggests the presence of a chronic process. The pulses of the feet were palpable. There was no edema. The skin was of poor turgor, and the neurological examination was negative.

Laboratory findings provide no help. The urine was normal. We find no laboratory evidence of syphilis. There was a slight hypochloremia.

The electrocardiogram taken a year and a half before death was interpreted as showing some left ventricular hypertrophy and possibly damage to the interventricular septum. Atrial flutter was present at that time. This is further evidence of myocardial involvement.





Figure 1

Chest x-ray taken in 1954 reveals bilateral apical lesions showing associated calcification. The aorta is tortuous and there is slight left ventricular preponderance.

Chest films taken six years before death were reported as normal. These were small films. Four years before death bilateral apical shadows of infiltration appeared, and a foreign body was noted. The aorta was tortuous. A film taken a year and a half before death showed no change. In this interval prior to death, the heart became huge.

On viewing Dr. Firminger's small slides showing the chest roentgenogram, the first film was not helpful. It shows a little calcium in the ascending aorta. The next film shows an area of calcification in the lung. This will be discussed later.

The film shown in figure 1 was taken in 1954. A bilateral apical lesion is present, showing associated calcification. There is considerable reaction in the apices with calcification, but there are changes in other parts of the lung. The aorta is a bit tortuous. There is some slight left ventricular preponderance.

The next film, taken a year and a half before death, shows areas of calcification associated with apical infiltration which I am designating to be tuberculous. There are other calcified areas and additional fibrotic changes.

The calcification of the ascending aorta is interesting. Dr. John Dennis reminded me that calcification in this particular area is most commonly caused by syphilis, not by arterioscle-

rosis. He tells me that he has seen only one patient with arteriosclerotic changes accounting for calcification in the ascending aorta. Thus the possibility of syphilis is more likely.

The film shown in figure 2 was taken at the time of admission, four days before death. The film taken a year and a half before showed an infiltrate in area. Some of the changes were interpreted as representing congestion. Note the broad base of the heart and the cardiac shadow extending into a wide area of the right chest. There is a prominent left cardiac border, and on careful inspection one can see a diffuse infiltrate which is bilateral and which cannot be ascribed to congestion. I do not think it is caused by a miliary tuberculous spread but rather by extensive fibrosis.

The heart is huge, almost like a water bottle in configuration. The point that has troubled me in not selecting myocardial disease primarily is the speed with which this heart increased in size.

Enlargement of a heart is not necessarily an indictment of death.

Fluoroscopic help is needed to determine whether or not there is cardiac motion. We are denied this information, presumably be-



Figure 2

Chest x-ray taken four days before death again showing the bilateral apical lesions. The lungs seem to show congestion and perhaps extensive fibrosis. The cardiac shadow is large with "water-bottle" configuration.

cause the patient's poor condition did not permit this type of study.

Nothing seemed to help the patient, including salt restriction and rest. Because of the possibility of digitalis toxicity, he was given potassium, but with no change in rate. He was titrated with several cardiac stimulants which did not slow the rate. Digitoxin was pushed and provoked only slight slowing, the rate remaining around 160 to 180. He continued to have congestion, but there was no marked overt evidence of increased venous distention. Here the word *marked* is used.

The patient's condition worsened, and he was fully digitalized. The urinary output was low because of vascular embarrassment and limited intake. Perhaps he had an endocardial lesion in addition to the myocardial injury. It is sometimes difficult to diagnose bacterial endocarditis accurately. Recently Gleckler reported ten such patients, all over 50 years; three had conventional signs of endocarditis, three were admitted with psychotic manifestations as the primary difficulty, one had hemiplegia, one had renal insufficiency, one had simple asthenia, and one had acute abdominal pain. The manifestations may be bizarre in bacterial endocarditis; however, I do not consider bacterial endocarditis as being present.

The blood pressure varied from 210/110 to 100/60. Thus, the diastolic pressure is low without an aortic diastolic murmur.

Just before death, the patient developed frank pulmonary edema which did not respond to treatment. He sat erect in a chair and died.

The last recorded temperature was 101°.

Four years prior to admission the clinical manifestations were chest pain (noted on reclining), blood pressure 220/80, Corrigan pulse, aortic systolic and diastolic murmurs, bilateral apical infiltration. Three weeks prior to hospitalization dyspnea, orthopnea, delirium, and weight loss occurred.

Physical signs included fever, tachypnea, tachycardia which failed to respond to digitalis. When adventitious rhythms or tachycardia fail to respond fully to digitalis or its derivatives, extracardiac causes may be present. In febrile conditions, thyrotoxicosis, and pulmonary infarction, the response will not be optimal. In patients with pericardial effu-

sion and without congestive heart failure there will be no significant slowing of the pulse with digitalis.

Failure to slow the rate (unless there is a burned out myocardium) may be significant. Moreover, the pulse pressure was narrow, although this was not uniform. Finally the cardiomegaly, gallop, mitral systolic murmur, signs of pulmonary congestion, hepatomegaly, and clubbing complete the picture.

Now to consider the various possibilities. With syphilitic or degenerative aortitis there should have been coronary ostial involvement with anginal signs. This was not present.

If coronary artery disease was the prime change, and it could be, then we must presume myocardial fibrosis and hypertrophy; terminally there may have been a fresh infarct or septal rupture. A septal lesion was diagnosed by EKG a year and a half before death.

Myocardial scarring and fibrosis usually lead to serious physiological derangements. Myocardial muscle has three to four times the blood supply of skeletal muscle. Each myocardial fiber is associated with one or more blood vessels leading to a blood flow which is ten times that of skeletal muscle. In myocardial infarction, in diffuse coronary artery disease with fibrosis, or in chronic myocarditis when the interstitial areas are compromised, the cardiac blood supply is impaired.

Similar vascular deficiency may develop with hypertension. The hypertensive heart may dilate and hypertrophy. The hypertrophied fiber may interfere with the blood supply, since the vessels do not regenerate and there is a longer and less efficient vascular pathway.

Chronic myocarditis leading to death is a possibility. The course was rather short. Rheumatic myocarditis is the most common type.

Sarcoid disease occasionally involves the myocardium as well as the lung, but this is an unlikely diagnosis. Tuberculosis of the myocardium is rare. Fiedler's myocarditis is merely to be mentioned as an isolated form of myocarditis. The heart alone is damaged, and our patient had multiple tissue involvement.

Neoplastic disease of the myocardium, such as carcinoid or myxoma, may be quickly dis-

carded from consideration. Lupus erythematosus could stimulate this picture, for endocardial, myocardial, and pericardial involvement are commonly associated with pulmonary changes; but I do not think that the patient had this disorder. Amyloid disease of the heart could occur as a sequel to syphilis or tuberculosis or to the connective tissue diseases, but it is unlikely to have developed so rapidly.

My impression is that the patient had pericardial involvement. I do not believe that it was pyogenic. Nor do I favor rheumatic carditis, although pericardial involvement occurs commonly, usually in the younger patient. Neoplastic heart disease with involvement of the pericardium is unlikely. Under these conditions, the fluid is usually bloody, as it is in tuberculous, rheumatic, and pyogenic pericardial effusions. Bloody effusions may occur in lupus erythematosus.

I have indicated my impression against bacterial endocarditis, although bacterial valvulitis of the aortic valve may occur in luetic aortitis. The same may be said for a superimposed infection in a patient with arteriosclerotic changes, particularly in older people. These are distinct possibilities.

The cardiac configuration is hardly compatible with pure mitral stenosis. Mitral stenosis and insufficiency may lead to huge hearts; moreover, the intensity of the mitral systolic murmur may not represent a true index of the degree of insufficiency. Nevertheless, I am disinclined to choose rheumatic heart disease as the basic difficulty in this 54-year-old man. The question of luetic aortitis is troublesome, because a diastolic murmur was noted four or more years previously; ordinarily such patients fare badly. Aortic insufficiency places a great load on the left ventricle and ultimately on the entire heart. The patient allegedly had a Corrigan pulse, which ultimately disappeared. This would represent my first experience with respect to regression of frank syphilitic aortitis.

The possibility of dissecting aneurysm is mentioned only for completeness.

I believe the pulmonary disease to be tuberculous in nature. It resembles tuberculosis with respect to location and configuration. Calcification is present. It must always be consid-

ered as a possible cause of disease in a febrile Negro.

The pulmonary changes are hardly indicative of pulmonary congestion or of mycotic diseases, although histoplasmosis may mimic tuberculosis. Histoplasmosis is recognized frequently in Maryland.

Pulmonary fibrosis is undoubtedly present, but its pathogenesis is not clear to me. Sarcoid of the lung is unlikely, as is alveolar proteinosis. The latter condition is characterized by the infusion of a protein-like material into the alveoli. Biopsy is the only sure diagnostic method. It would be difficult to explain all of the lesions on the basis of bronchogenic carcinoma. Pulmonary adenomatosis is an interesting form of lung cancer which may produce diffuse changes. Cough with copious expectoration is typical, but I do not consider it likely.

Lupus erythematosus may involve all the tissues concerned in this case and it occurs in both sexes. I doubt that is caused the extensive pulmonary changes. Conditions causing primary changes in the pulmonary vessels, such as Ayerza's disease, can be ruled out in the absence of signs of right-sided heart failure and cyanosis of the nail bed.

This case presented a difficult problem. When pericardial effusion is present, there ought to be signs of increased venous pressure. In this patient, it wasn't marked, and there was no paradoxical pulse or Ewart's sign. The latter is an area of dullness and bronchial breathing in the left base observed in the presence of pericardial fluid or in the presence of a huge heart. The report of a narrow pulse pressure is confusing because of its intermittent nature. I believe the heart to be large.

I read the case history several days ago, but studied the films this morning. Originally the likelihood of a large heart and hypertension with cardiac hypertrophy was favored. It was presumed that he had coronary artery disease with a poor myocardial blood supply and that death resulted from myocardial infarction or acute pulmonary edema. Rupture of the myocardium or septum were considered. The possibility of an aneurysm of the left ventricle was given fleeting consideration. A tired myocardium was also considered.

Pericardial disease seemed quite possible in view of the sudden enlargement of the cardiac silhouette. The hypotension could have resulted from attendant myocardial embarrassment.

Ventricular fibrillation, rupture of the heart or of a major blood vessel, and myocarditis are common causes of sudden death. Death in this patient seemed inevitable; hence it is not to be regarded as sudden.

Cardiac tamponade may lead to sudden death. Patients who accumulate pericardial fluid slowly rarely die suddenly. On the other hand, children may accumulate fluid rapidly and have little time to compensate. When the external cardiac pressure is too great, cardiac output ceases.

The cardiac configuration suggests pericardial fluid and that is the choice I will hold to. I don't mind venturing a specific etiologic opinion. There appear to be extramyocardial causes, such as the fluid, contributing to the patient's difficulty. The clues to the nonmyocardial factors contributing to death are: temperature exceeding that ordinarily found in chronic passive congestion; apical tuberculosis; and pulmonary fibrosis, which contributed to his difficulty. The cardiomegaly developed much more rapidly than would have occurred with the various entities discussed. We must prophesy some degree of myocardial insufficiency with some pulmonary edema. The history dictates this, particularly before the terminal events, but this is not the whole story. I think he had pericardial effusion and, since he had tuberculosis of his lungs, it is logical to predict tuberculosis of the pericardium. The fever, x-ray configuration, and other findings lead me to that conclusion.

The aortitis really bothers me. I don't know whether he had healed luetic aortitis; it is possible.

DR. FIRMINGER: I think you'll see that Dr. Woodward has done a magnificent job of unraveling this case, which is really a difficult one, as he said.

We have withheld nothing in the history. We would like to have had a few more items of information. I am particularly sorry that the result of the tuberculin test was not available. Actually, it was done, but somehow no record was made of the result. I think we can surmise a few additional things from the history as we look at the sections.

At the time of autopsy, this man was 5 feet 8 inches tall and weighed only 110 pounds. While obviously wasted, he was otherwise well developed.

The examination of the chest, which is perhaps the most interesting part of this case immediately presented difficulties because when the chest was opened, the lungs were densely adherent with fibrous obliteration of the pleural cavities. When the lungs were removed, they were quite heavy, weighing 2,150 grams, and on section exuded a moderate amount of fluid. They were diffusely firm but somewhat nodular. The hilar lymph nodes were distinctly firm or even hard, black, and difficult to cut. A section of one such lymph node revealed areas similar to some seen in sections of the lung. There was an immense amount of anthracotic pigment, but associated with this was a great deal of fibrosis.

Anthracotic pigment by itself ordinarily elicits little fibrosis, so that when one sees this amount of fibrosis, one suspects some other underlying cause. A section viewed between crossed polaroid filters reveals many birefringent little needles scattered throughout, indicating the presence of silica. Thus the nodes which we saw and much of the black, firm, and slate gray fibrosis in the lungs can be readily accounted for on the basis of anthracosilicosis. As a matter of fact, this was not limited to the chest, but extended down to involve nodes in the abdomen, particularly the peripancreatic and the portohepatic lymph nodes. A perigastric node was also involved. We will therefore have to assume that, as a stevedore, he must have come in contact with loading or unloading anthracite coal.

In addition, there were distinct large scars at the apices, as you would suspect from the x-rays, which extended for some distance into the parenchyma of the lung. There was some emphysema around the periphery of the lungs associated with the fibrosis. In some of the fibrotic areas there was typical caseous material, some of which was chalky. I might add that a Ghon complex was clearly evident in the middle lobe of the right lung and corresponding hilar nodule; both were chalky on cut section. Section of the lymph node from the



hilus of the lung and from multiple areas of the lung revealed areas of caseous necrosis surrounded by epithelioid cells and numerous multinucleated giant cells of the Langhans' variety with lymphocytes and some plasma cells out around the periphery—typical tubercles.

Sections stained with acid-fast stains revealed acid fast rods which were characteristically beaded—typical of the tubercle bacillus. So we felt assured that we were dealing with a tuberculous process, although we didn't actually isolate the organism and culture it.

In some sections from the lung there was a rather extensive caseous process which appeared recent; there was some retention of alveolar walls that hadn't yet become completely caseous, and in places one noted the picture of a tuberculous type of pneumonia. So, this was an active spreading tuberculosis at the time he died.

The pericardium was distended at the time of opening the chest. Immediately on entering the pericardial cavity about 600 cubic centimeters of green, muddy fluid came out. The pericardium could be reflected only with some difficulty because of the marked adherence. The epicardium was distinctly shaggy, and this was adherent anteriorly. It was fairly free posteriorly, where most of the fluid was accumulated, but the heart was held anteriorly. Whether or not this had something to do with the negative Ewart's sign, I'm not sure.

A section of the myocardium and epicardium revealed a caseous lesion in the epicardium with reacting epithelioid cells, many lymphocytes, and a few giant cells (fig. 3).

This is a rather typical picture of tuberculous pericarditis, as Dr. Woodward has suggested. The question arises as to how tuberculous pericarditis came about. A number of routes have been suggested. A direct breakdown of hilar lymph nodes into the pericardium cannot be demonstrated here. The possibility of spread by way of lymphatics into the pericardium is a possibility, although it has been denied that lymphatics drain the pericardium. Dr. Woodward will attest to the fact that the last CPC I had given him had a chylopericardium, and we feel sure some



Figure 3  
Epicardium containing fibrocaseous granulomatous lesion with Langhans giant cells typical of tuberculous pericarditis. Hematoxylin and eosin section X 150.

connection with the lymphatic system may exist; however, the connections may be rather minimal, because we have built-in tracer studies in many of our autopsies with anthracosis. As was mentioned, the anthrasicosis in this case went down even into the abdominal nodes; yet we did not see it getting into the pericardium. I think that if there are any retrograde or any lymphatic connections in the pericardium, they must be relatively small. Consequently, although this is a possibility, I am reluctant to believe that this is the mechanism of tuberculous pericarditis.

The possibility of hematogenous spread always exists. In a section of the liver there was typical tubercle formation in a portal area with caseous necrosis and with Langhans' type giant cells. The rest of the liver was not particularly remarkable, aside from some passive congestion.

A section of spleen showed several similar tubercles, so that hematogenous spread was obvious. This is a mode by which the pericardium could have become involved.

It is much more likely that the pericardium became involved by direct continuity from pleural involvement, for all the pleurae were densely adherent, and some of the pleura was shaggy, much the same as the pericardium. Therefore, I think that the route was transpericardial, probably from the pleura.

Now we come to the facet of the case, which perhaps bothered Dr. Woodward most. The patient started out twenty years ago with signs and symptoms that certainly suggested a luetic aortitis and luetic aortic valve involvement. When we examined the heart it was greatly enlarged. It weighed 700 grams. The left ventricle was about 25 millimeters thick, the right measured about 5 millimeters. The tricuspid valve was a little dilated, but of more interest was the aortic valve. Although the leaflets of the aortic valve were perfectly thin, they were slightly rigid, and there was distinct separation of the commissures by about 1 or 2 millimeters in the aortic valve, which we ordinarily attribute to syphilis.

Looking at the ascending aorta, as Dr. Woodward pointed out, there was calcification and arteriosclerosis in the aorta, stopping at about the origin of the left subclavian artery. This strongly suggests syphilis, as he has indicated.

When we examined sections of the ascending aorta with hematoxylin and eosin, the changes were not too striking, and the only way one could really pick up the fact that this was truly lues, would be by doing connective tissue and elastic tissue stains on the aorta. Such sections of the aorta revealed fibrosis around the vaso vasorum in the thoracic aorta with destruction of elastica, which is typical of luetic aortitis (fig. 4). It was noteworthy that no inflammatory cells were present. This indicated an old burned out lesion, which as Dr. Woodward has suggested, we believe to be a healed luetic aortitis. The valves were rather delicate because the basic lesion is really a luetic aortitis which attacks the commissures rather than the leaflets.

Apparently the leaflets were reasonably pliable, and the regurgitation must have been less than might be expected in most cases. Perhaps this valvular involvement plus the distinct dilation of

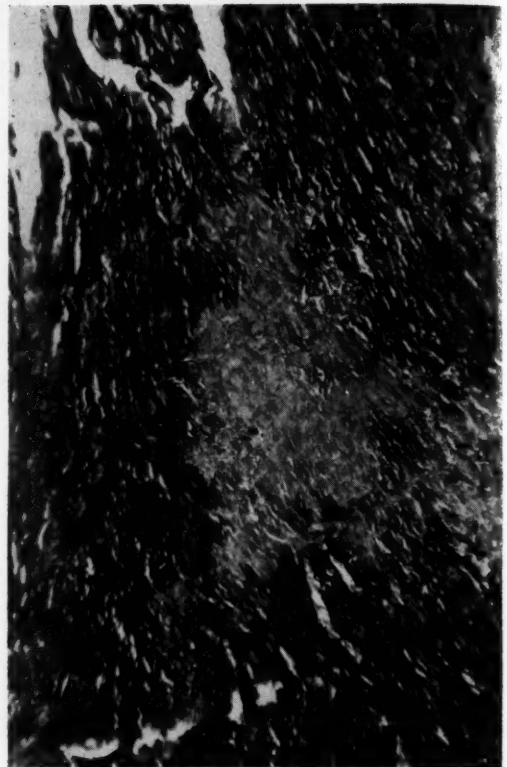


Figure 4  
Ascending aorta stained with Verhoeff van Gieson revealing the central scarring about the vaso vasorum replacing the normal elastic tissue (stained black) of the media. X 75

the aorta above the aortic valve with a little sacular formation, not a true aneurysm, might account for the systolic murmur of a relative aortic stenosis, but with little regurgitation.

If we try to put this case together, then, it would seem that twenty years before death this man suffered from luetic aortitis and luetic aortic valvulitis. We were not given a history of his being treated, but he must have been; otherwise this regressed spontaneously, which certainly can happen. His blood tests were all negative subsequently, and I can see no other evidence of activity.

His work as a stevedore apparently exposed him to anthracosilicotic material, and he developed fibrosis of the lungs from anthracosilicosis. Superimposed upon this, he had tuberculosis over a prolonged period. Recently his tuberculosis became activated; . . . why, we don't know. There

was spread to further involve the pleura and certainly throughout the lung. The process spread into his pericardium and produced pericarditis, which is all of recent origin, corresponding with the history of only a matter of weeks or, at best, a few months.

With this occurred weight loss and progressive disease. I think the real curve ball in this case is the absence of a paradoxical pulse and of Ewart's sign. I cannot explain the lack of elevation of venous pressure specifically except to say that high elevation of venous pressure doesn't accompany tuberculous pericarditis in most instances. Perhaps the adhesions of the lungs and heart may have had something to do with the negative Ewart's sign. The absence of a paradoxical pulse I can only blame on the fact that this aortic lesion existed and perhaps modified it.

I would like to refer you to an article by Linell (1), who studied cases of tuberculous pericarditis in the Firland Sanatorium. He emphasized the absence of many of the classical symptoms, including dyspnea and progressive lethargy. A low grade fever was present but was not striking. Often precordial pain was absent. In the sanatorium, at least, the presence of a pericardial effusion to him was suspect of tuberculous pericarditis and actually carried a grave prognosis, corresponding to the findings of Wood (2).

In most of the cases there was an enlarged cardiac silhouette, with some elevation of pulse rate from 110 to 120, perhaps even out of proportion to the low grade fever. During the time there was an effusion, there were muffled heart sounds, particularly early. There were friction rubs during the period of paradoxical pulse, elevated venous pressure, and prolonged circulation time; but all of these tended to reverse with the removal or disappearance of the effusion unless there was constrictive pericarditis.

Perhaps the best study, at the moment, of tuberculous pericarditis is that of Wood (2), in which he analyzed some 41 cases. In this study the fever generally ranged between 100 to 103.9, the pulse varied from 100 to 120, and in more than 75 per cent of the cases, the heart was enlarged to percussion. The heart sounds in about half the cases were normal; in the other half they were somewhat muffled. Murmurs were either absent or, at the most, perhaps 25 per cent might have had systolic murmurs. A pericardial friction rub was

present in about 33 per cent of the cases. Effusion was seen by x-ray in about 33 per cent. Anemia was present in about half. Leukocytosis was either absent or rose, at the highest, to around 14,000. Sedimentation rates were elevated in almost all the cases. The venous pressures surprisingly were not notably elevated, and in almost all the cases the venous pressures measured between 100 and 149. Only a few cases got up to 300mm. H<sub>2</sub>O.

The pericardial fluid was that of an exudate with a specific gravity higher than 1.015 or 1.018. Lymphocytes and red cells tended to predominate as the cellular components. Those cases in which tuberculous organisms could be found in the pericardial effusion forbode a bad prognosis. Wood found this condition in four patients. He tried to analyze his findings with respect to prognosis, and he emphasized a number of things which agree well with our problem today.

Patients over 50 with tuberculous pericarditis have a bad prognosis. All but one died in less than a year; the other lived somewhat less than five years. The onset was gradual in those patients; this may be more gradual than we realize. Those with sudden onset had a better prognosis. It tended to occur in younger individuals. Fifteen of the nineteen deaths came on gradually. White patients predominated over Negroes in the fatal group, in contrast to this case.

Wood pointed to cardiac arrhythmias as a distinctly bad prognostic sign. These included auricular fibrillation, auricular flutter, and premature ventricular contraction. As you know, auricular flutter occurred in this case. This condition proved fatal in all of those that had cardiac arrhythmias (nine out of forty-one).

Clinical proof of tuberculosis pericarditis was regarded as a poor prognostic sign. Signs that Wood felt were of little or no importance included the presence of the pericardial friction rub, the presence of the effusion, or even the presence of cardiac failure. These seemed to have little effect on prognosis.

I think Dr. Woodward has done a magnificent job with this without too much to go on and with obvious "red herrings" in the laboratory tests.

#### REFERENCES

1. Linell, M. A.: *Amer. Rev. Tuberculosis and Pulm. Dis.* 76:636-642, 1957.
2. Wood, J. A.: *Amer. Heart. J.* 42:737-745, 1957.

## HOUSE RESOLUTION NO. 75

*By Mrs. Schweinhaut*

House Resolution Commending the Medical and Chirurgical Faculty of Maryland for sponsoring and implementing the "Appointment With Health" Campaign.

Many aged persons throughout the country are capable of improving their health and extending their useful lives by availing themselves of the services offered by various facets of the medical profession.

The Medical and Chirurgical Faculty of Maryland, recognizing this fact, and acting pursuant to a recommendation of the Maryland Commission on Aging, organized and sponsored an "Appointment With Health" Campaign, which lasted throughout the month of November in 1960.

This program, implemented by a committee chairmaned by C. Rodney Layton, M.D., arranged for the physical examination of 527 needy persons over sixty-five years of age. Because of adverse weather conditions in November, 207 additional persons were unable to keep their appointments, but will be examined in the very near future.

The Medical and Chirurgical Faculty of Maryland is to be highly commended for this fine humane effort, the first such effort in the country, on behalf of the needy aging people of Maryland; now therefore, be it

*Resolved by the House of Delegates of Maryland, That the hearty commendations and congratulations of this body be expressed to the Medical and Chirurgical Faculty of Maryland for the sponsorship and implementation of the "Appointment With Health" Campaign; and be it further*

*Resolved, That the Chief Clerk of the House of Delegates be instructed to send a copy of this Resolution to the Medical and Chirurgical Faculty of Maryland and Dr. C. Rodney Layton, c/o the Medical and Chirurgical Faculty of Maryland, 1211 Cathedral Street, Baltimore, Maryland.*

By the House of Delegates, March 31, 1961.

Read and adopted.

By order, James P. Mause, Chief Clerk.

*/s/ James P. Mause*  
\_\_\_\_\_  
Chief Clerk of the House of Delegates.

*/s/ Perry O. Wilkinson*  
\_\_\_\_\_  
Speaker of the House of Delegates.





## ALLEGANY-GARRETT COUNTY MEDICAL SOCIETY

LESLIE E. DAUGHERTY, M.D.

*Journal Representative*

### DOCTOR'S DAY PROGRAM

Doctor's Day was observed with a joint dinner at the Ali Ghan Country Club. The guest speaker was **Russell Fisher, M.D.**, of Baltimore, whose illustrated talk was interesting and informative.

Flowers were placed in the churches and in the physicians' offices by



Left to right: Russell Fisher, M.D., Chief Medical Examiner of Maryland, Benedict Skitarelic, M.D., Mrs. Skitarelic, and Ralph A. Reiter, M.D.

the members of the Woman's Auxiliary to the Allegany-Garrett County Medical Society.

### PERSONALS

The Tri-State Area County United Fund Foundation has health research and services as one of its projects. **Abraham J. Mirkin, M.D.**, Cumberland, was elected president for the ensuing year.

**Harold W. Eliason, M.D.**, and **Robert Brodell, M.D.**, are directors of Friends Aware of Handicapped Children. This lay medical organization has chapters in Cumberland, Frostburg, and Westernport.

**Earl Paul, M.D.**, Cumberland, recently attended a meeting of the Heart Association in Richmond, Virginia.

**Alvin J. Walters, M.D.**, Frostburg, is conducting a series of lectures on cancer throughout the county.

**Hilda J. Walters, M.D.**, home on a vacation from Haiti, gave an illustrated talk of her work with MEDICO before the Business and Professional Women's Club of Cumberland.

**Leslie R. Miles, Jr., M.D.**, Lonaconing, attended the recent family doctors convention at Miami Beach, Florida. The meeting was under the auspices of the American Academy of General Practitioners.

Five per cent of the population of Allegany County are on medical assistance. The average cost per prescription was more than \$2.50. Each person who received assistance averaged less than 27 prescriptions during the year.

#### SYMPATHY

We are sorry to hear of the recent death of the mother of **George M. Simons, M.D.**, Cumberland.

### BALTIMORE CITY MEDICAL SOCIETY

CONRAD ACTON, M.D.

*Journal Representative*



In the renascent Osler Hall, with a bright red, white-figured curtain behind the speaker's stand, the Baltimore City Medical Society held its semiannual business meeting on Friday, April 7. Election of new members was accomplished by a new procedure; members handed in their marked ballots at the end of the meeting as they left the hall.

President **Charles W. Wainwright** read the opinion of our legal counsel regarding proxy voting. **Mr. G. C. A. Anderson** pointed out first that our Society is not a corporation under the laws of the State of Maryland, and second that our constitution has no provision for voting in absentia or by proxy; he specified appropriate clauses to support his point. Mr. Anderson's opinion, therefore, is that proxy voting is not now permitted. The sponsor of the proxy-voting motion asked whether our City Society might be bound by the constitution of the State Society, which is an incorporated body. President Wainwright declared that the City Society, unless it chose otherwise, was bound by this interpretation of its legal counsel. The sponsor moved that the Society approve "counsel for both sides sitting

down across the table for a friendly hearing on the measure." This motion was soundly defeated. The sponsor asserted that the Society would "just have to take what's coming," or words to that effect.

New business consisted of a review of the five resolutions scheduled for submission to the House of Delegates at the Faculty's imminent Annual Meeting. Interpretation and background of the resolutions were amplified by fill-in data provided by our past president, **Everett Diggs**, chairman of the Faculty Resolutions Committee.

Resolution number 1, regarding the legality of payment of professional fees to hospital educational funds by Blue Shield, probably had the most lengthy consideration and broad ramification. It was passed over "without action" by the Society. Discussion ranged from its teaching aspects to its tax aspects. Concern was expressed that divergent resolutions had been made on higher committee levels without considering this resolution. Higher echelon activity without communication to the component societies was decried.

Resolution number 2, urging physicians to

remove the physician's cross and similar identification from their automobiles, was decisively rejected. This was felt to be a personal matter and not worthy of being brought before the Society. Each physician should act according to his own taste.

Resolution number 3, to include Maryland physicians under the Social Security program, brought probably the sharpest dichotomy. Although a large majority voted against this, a hard core of individuals staunchly favored it. Viewing the children and survivor aspects of the program, such as many clergymen elect, the vocal minority favored obtaining these "advantages" for themselves by specifying a voluntary system at whatever cost.

Resolution number 4, regarding fee schedules, was beyond the scope of most of the members present, judging from the questions asked. Those who spoke, however, did so with a ring of authority. **George Greenstein, M.D.**, pointed out that regardless of whatever resolution might be emotionally carried by vote of practitioners, there does exist a firmly established legal difference of responsibility between the specialist and the generalist in the courts. The Veterans Administration also recognizes and demarcates the difference between general practitioner and specialist; likewise Workmen's Compensation laws in many states establish a differential between general practitioners and specialists in matters of compensation and responsibility. It is Doctor Greenstein's considered opinion that if, by resolutions such as this, the Faculty's (meaning organized, responsible medicine's) hands are tied, then laymen will, at least in the categories mentioned, have to decide who are specialists and who are nonspecialists. In line with this argument, the resolution was dis-

approved.

Resolution number 5, for freedom of choice of physicians in Workmen's Compensation cases in Maryland, again revealed some confusion of thinking. In the Baltimore area, at any rate, the weight of expressed opinion indicated that this is a legally involved problem. Enlightened employers were reported as desiring the best medical care for their employees, and able to afford consultation, whenever requested, with either the patient's own physician or a neutral specialist. It was explained that some of the dispute from which this resolution arose came from the arbitrary action of a county school board. The action has since been rescinded. On the basis of the Baltimore situation, the unanimous vote was to disapprove the resolution.

Ordinary members then adjourned to enjoy coffee and doughnuts served by **Ellen** and **Walter**. Delegates and alternates remained with the Executive Board to organize for action at the Faculty's Annual Meeting. It was emphasized and reiterated that the City Society put no moral or other obligation on delegates to support or reject any resolution. Express action of the City Society requires delegates to act purely as their experience and judgment dictate for the good of the whole Society. Actions by the City Society, as taken at the meeting, were not to be considered binding except for those originating and developing within the Baltimore City Medical Society. More experienced delegates suggested that organization among themselves was a good idea; however, lacking enthusiasm for this, no action along this line was taken. On a note of free will and determinism, the delegated members of the Society also came out to enjoy the refreshments.

## RESOLUTIONS • • • •

### Medical and Chirurgical Faculty

All resolutions to be presented to the House of Delegates at its meeting on Friday, September 15, 1961, *must* be in the Faculty Office, 1211 Cathedral Street, Baltimore 1, *no later* than Friday, July 21, 1961.

## FREDERICK COUNTY MEDICAL SOCIETY

L. R. SCHOOLMAN, M.D.

*Journal Representative*

The April meeting was held at the Francis Scott Key Hotel on the 18th. The guest speakers were **Mr. P. David Youngdahl**, new administrator of The Frederick Memorial Hospital, **Mr. John Sargeant**, executive secretary of the Med Chi, and **Mr. Tom Sherlock**, public relations director of Blue Cross.

Mr. Youngdahl kicked off with a few words about hospital teamwork. Mr. Sargeant then listed briefly some of the non-scientific activities and accomplishments of the Faculty. When he spoke of the hospital utilization committees which are to be set up for each hospital, he was drawn into a debate by one of our more articulate members, **Thomas Reid**,

**M.D.**, roentgenologist, concerning the factors leading to these committees. Mr. Sherlock was soon drawn into the discussion and proved himself adept with words.

During the business meeting which followed, votes were taken on the resolutions to be submitted to the House of Delegates on April 26. Then the members, having decided that we had too much money in the Treasury, appropriated \$75.00 for an Alcoholics Anonymous representative to attend a lecture course at Yale Medical School, \$100.00 for the Frederick Memorial Doctor's Library, and \$100.00 for the Frederick County Medical Society Scholarship Fund.



## MONTGOMERY COUNTY MEDICAL SOCIETY

CHARLES FARWELL, M.D.

*Journal Representative*

**Clifton R. Brooks, M.D.**, appeared on "Inga's Angle" television show, March 14, 1961, to discuss "Problems of Adolescence." He also spoke to the L.B.S. Health Club at the Hecht Company Auditorium on "Allergic Aspects of Obesity"; to the Suburban Nurses Club at the North Four Corners Recreation Center on "Convulsive Disorders"; to the faculty at Leland Junior High School on "Convulsive Disorders"; and to the eighth and ninth grade Science Club at North Bethesda Junior High School about "Aerospace Medicine."

**Jason Geiger, M.D.**, addressed the Takoma Park Lions Club at Captain Jerry's Restaurant, Silver Spring, on "Strokes."

**Charles J. Savarese, M.D.**, spoke to the Knights of Columbus, Rock Creek Council, 5417 Cedar Lane, on "Living with Your Heart."

**David Goldenberg, M.D.**, spoke to the

Homemakers Club. His topic was "In Case of a Heart Attack."

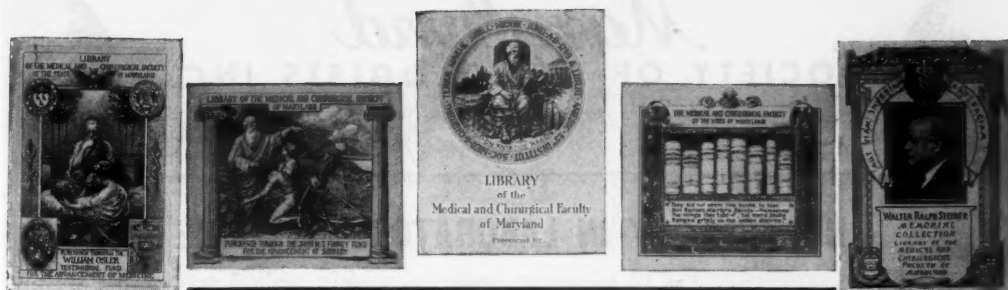
**Peter A. Santucci, M.D.**, "The World of the Child" discussed at a meeting of the Parent-Teacher Association at Radnor Elementary School. He addressed the Parent-Teacher Association at Wood Acres Elementary School on "Psychological Problems of School Children."

**Joseph O. Dean, M.D.**, talked about "Heart Attack" at the Keating Club at 13432 Keating Street.

**Bernard W. Murphy, M.D.**, spoke to Ashburton Elementary School Parent-Teacher Association. His topic was "Permissiveness and Discipline."

"Medical Education and the Health Program in the Soviet Union" was the controversial topic presented by a secretary of the Soviet Embassy at one of our scientific dinner meetings.





## Library

George L. Yashur, *Librarian*

"Books shall be thy companions; bookcases and shelves,  
thy pleasure-nooks and gardens." *Ibn Tibbon*

### A SELECTED LIST OF NEW BOOKS ADDED TO THE LIBRARY

- Abrams, H. L., ed.*: Angiography. Bost., 1961.
- Abramson, Harold*: Resuscitation of the newborn infant. St. Louis, 1960.
- Adams, J. M.*: Newer virus diseases. N. Y., 1960.
- American Academy of Orthopedic Surgeons*: Instructional course lectures. v. 17, 1960.
- Arbeit, S. R.*: Differential diagnosis of the electrocardiogram. Phil., 1960.
- Astwood, E. B., ed.*: Clinical endocrinology. N. Y., 1960. v. 1.
- Bailey, Hamilton*: Demonstrations of physical signs in clinical surgery. Balt., 1960.
- Bakulev, A. N., ed.*: Surgical treatment of mitral stenosis. U.S.P.H.S., 1960.
- Bechtol, C. O.*: Metals and engineering in bone and joint surgery. Balt., 1959.
- Beckman, Harry*: Pharmacology. Phil., 1961.
- Birren, J. E.*: Handbook of aging and the individual; psychological and biological aspects. Chic., 1959.
- Blades, B. B., ed.*: Surgical diseases of the chest. St. Louis, 1961.
- Bliss, E. L.*: Anorexia nervosa. N. Y., 1960.
- Bloomer, W. E.*: Surgical anatomy of the bronchovascular segments. Springfield, Ill., 1960.
- Bloomfield, A. L.*: A bibliography of internal medicine. Chic., 1960.
- Blum, R. H.*: Management of the doctor-patient relationship. N. Y., 1960.
- Bowers, W. F.*: Surgical gastroenterology. Springfield, Ill., 1960.
- Bowesman, Charles*: Surgery and clinical pathology in the tropics. Lond., 1960.
- Breckenridge, M. E.*: Child development. Phil., 1960.
- Buie, L. A.*: Practical proctology. Springfield, Ill., 1960.
- Butt, A. J., ed.*: Treatment of urinary lithiasis. Springfield, Ill., 1960.
- Castellani, Sir Aldo*: A doctor in many lands. N. Y., 1960.
- Cole, W. H.*: First aid. N. Y., 1960.
- Coley, B. L.*: Neoplasms of bone. N. Y., 1960.
- Collins, L. H.*: Internal medicine in dental practice. Phil., 1960.
- Conwell, H. E.*: Management of fractures. (Keys) St. Louis, 1961.
- Cronkite, E. P.*: Radiation injury in man. Springfield, Ill., 1960.
- Cross, L. M.*: Preparation of medical literature. Phil., 1959.
- Curran, W. J.*: Law and medicine. Bost., 1960.
- Dargeon, H. W.*: Tumors of childhood. N. Y., 1960.
- Davis, L. E.*: Fellowship of surgeons. Springfield, Ill., 1960.
- Erickson, M. H.*: Practical application of medical and dental hypnosis. N. Y., 1961.
- Fleming, A. J.*: Modern occupational medicine. Phil., 1960.
- Flood, Peter*: New problems in medical ethics; tr. from French. Westminster, Md., 1960.
- Frimann-Dahl, J. C.*: Roentgen examinations in acute abdominal diseases. Springfield, Ill., 1960.
- Gray, L. A.*: Textbook of gynecology. Springfield, Ill., 1960.
- Greenhill, J. P.*: Obstetrics. Phil., 1960.
- Grinker, R. R.*: Neurology. Springfield, Ill., 1960.
- Grollman, Arthur*: Pharmacology and therapeutics. Phil., 1960.
- Hanlon, J. J.*: Principles of public health administration. St. Louis, 1960.
- Heftmann, Erich*: Biochemistry of steroids. N. Y., 1960.
- Hoffman, B. F.*: Electrophysiology of the heart. N. Y., 1960.
- Holland, W. C.*: Chemistry of heart failure. Springfield, Ill., 1960.
- Hollander, J. L.*: Arthritis and allied conditions. Phil., 1960.

(To be continued)



# Maryland

## SOCIETY OF PATHOLOGISTS INC.

EDWARD C. MCGARRY, M.D., *President*    MANNING W. ALDEN, M.D., *Secretary*  
Annapolis, Md.



### NUMEROLOGY IN LABORATORY MEDICINE

THE INCREASING USE of laboratory studies in modern medical practice has been justified by advances in laboratory science and by a better understanding of pathologic physiology on the part of the practicing physician. This understanding has not always been accompanied by an appreciation of the fundamental variability inherent in such studies. Two factors are largely responsible for the variability: the intrinsic error of the technique of analysis and the error of interpretation in terms of normality or abnormality. There is a consistent tendency in both clinical medicine and medical research to overestimate the accuracy of quantitative laboratory studies and to overestimate the constancy of findings in a given patient.

The technical or procedural accuracy of quantitative laboratory studies in good medical laboratories, although varying with the method used, generally is about plus or minus 10 per cent. Some studies, such as pH measurements, have a far greater order of accuracy; in others the error may be as much as plus or minus 20 per cent. The order of accuracy of any particular analysis should be obtained from the pathologist whom the practitioner consults.

Evaluation of the range of normal concentrations has been expressed by Hoffman\* in terms of three major groups of blood constituents: *nutritional substances*, both absorbed and intermediate products of metabolism (e.g. carbohydrates and carbohydrate intermediates, lipid intermediates, amino acids and protein intermediates, oxygen); *excretory substances* (e.g. CO<sub>2</sub>, urea, creatinine, uric acid, modified steroid hormones, bilirubin, displaced enzymes such as amylase); *functional substances* (e.g. albumin, globulin, fibrinogen, cations, chloride, bicarbonate).

A generalization may be made that nutritional substances analyzed in the basal state have a range of normal concentrations which deviate from the average by about 10 to 20 per cent. The range of normal levels of excretory substances is wider, deviating about 30 to 50 per cent from the average. Modest increases of excretory substances above this range may be diagnostically significant but are not necessarily accompanied by symptoms. The range of concentrations of functional constituents in normal individuals is narrower; i.e. 3 to 10 per cent deviation from the average. Deviations in excess of these values are of diagnostic significance and are usually accompanied by severe physiologic disturbances.

"Quantitative" immunologic studies are subject to similar limitations; methodologic error is of the order of plus or minus 50 per cent. Hematologic measurements are also subject to wide individual variation and to errors of method.

It is disturbing that physicians tend to place such great emphasis on the absolute numbers reported to them from clinical pathology laboratories. By appreciating the variables discussed above, they will be better prepared to evaluate laboratory studies in relation to clinical findings in disease states.

\* Hoffman, W. S., *The Biochemistry of Clinical Medicine*, ed. 2, The Year Book Publishers, 1959.

State of  
Maryland

## Department of Health

Perry F. Prather, M.D., Director

301 W. PRESTON STREET, BALTIMORE 1, MARYLAND

Telephone: VErnon 7-9000

### Guide to Health Information Materials for Patient Education

**T**HE GUIDE TO CURRENTLY available free or inexpensive materials on health and disease, published recently by the Maryland State Department of Health, is a handy reference for busy physicians who want to provide or suggest health information materials for patients.

The April issue of *Index Medicus* selected the annotated reference, titled "Guide Book Describing Pamphlets, Posters, Films, on Health and Disease," for its "Recent U. S. Publications" section.

The 175 page Guide Book lists, in dictionary order, subjects ranging from "accidents" to "x-rays," briefly describes each item, gives source and cost, if any, and indicates suggested audience level. This publication costs \$1.00, which includes periodic supplements listing new materials.

Selection of the annotated material is based on technical accuracy of subject matter, treatment of the subject matter consistent with current expert opinion, absence of commercial bias, cost, availability to the individual, and suitability for the general public.

According to Perry F. Prather, M.D., director of the State Health Department, the Guide Book

has been received enthusiastically by lay and professional people interested in promoting positive health practices and knowledge. Although it was developed primarily for use within the state, and the Health Department films listed may be borrowed by Marylanders only, orders have been received from all over the United States and some foreign countries.

Dr. Prather explained that a comprehensive collection of free and inexpensive health booklets, posters, films, and other educational aids was indexed by the Health Department's Office of Health Education as a reference for answering numerous requests from the public regarding sources of information about a wide variety of health subjects. Publication was undertaken when a general need for such a reference became apparent.

Indexing of the material was done by Carl G. Reitenbach, professor of health education at Towson State Teachers College. Although the material has been carefully reviewed, the inclusion of any item does not constitute an endorsement by Professor Reitenbach or the Maryland State Department of Health.



PLAN AH<sup>EA</sup><sub>D</sub>

**OCEAN CITY MEETING  
FRIDAY, SEPTEMBER 15, 1961**



## Baltimore Area Council on Alcoholism

(Successor to Maryland Society on Alcoholism)

### A New Feature is Added

**E**IGHTY THOUSAND MARYLAND citizens are alcoholics. This is our contribution to the five million persons in the United States who are problem drinkers. They do not come from just the lower classes or itinerant laborers but represent a cross section of the entire population. The popular image of the alcoholic is the "skid row" or derelict type of individual, but these constitute less than 3 per cent of the total.

Successful rehabilitation of the alcoholic requires understanding of his needs and obtaining his cooperation. Organic illness may aggravate his alcoholism. A psychological illness may often precede his alcoholism. If he had been well adjusted before becoming an alcoholic, his prognosis is excellent; if he was neurotic, he may require psychotherapy; if he was psychotic, treatment of the psychosis is essential. An occasional alcoholic is a psychopath (most psychopathic personalities become alcoholics); his prognosis for successful rehabilitation is poor.

Because of associated sickness and the recognition of alcoholism itself as a disease, nearly all Maryland physicians, regardless of the nature of their practice, see alcoholic patients. Many doctors encounter unusual difficulty in the satis-

factory treatment or referral for treatment of these patients.

Information on alcoholism particularly pertinent to the Maryland practitioner has not been widely available. To this end, the Baltimore Area Council on Alcoholism (formerly the Maryland Society on Alcoholism) has undertaken a monthly feature under the heading on this page. The Council's foremost project is *education* on alcoholism. This page will supply, in the months to follow, current information on alcoholic treatment and research programs in this state, reviews of legal procedure concerning commitment of alcoholics, and reviews of the actions of planning commissions pertinent to this field. Individuals closely identified with the treatment or research described will present brief descriptions of their work under their byline. Unsigned articles describing programs or procedures will be checked for accuracy with Maryland authorities to insure their value to you.

The Council invites suggestions for topics to be discussed, for this monthly feature is intended to be informative to you the reader.

Frank L. Iber, M.D.  
Editor for the Council

*W. B. Saunders Company features the following recent books in their full page advertisement appearing elsewhere in this issue:*

WHITE—CLINICAL DISTURBANCES OF RENAL FUNCTION  
*Diagnosis and treatment measures for kidney disorders*

RUBIN—THORACIC DISEASES  
*Covers both medical and surgical management*

MAYO CLINIC—DIET MANUAL  
*Recent advances in food, vitamin and dietary practice*

*The twenty-seventh annual meeting of the American College of Chest Physicians will be held at the Commodore Hotel, New York City, Thursday, June 22 through Monday, June 26. Scientific sessions will open Saturday, June 24 and will continue through Monday, June 26.*

*A joint session with the Section on Diseases of the Chest of the American Medical Association will be held at the Coliseum, Monday, June 26. This will be the first joint meeting in the history of the two societies.*



# STATE OF MARYLAND

## DEPARTMENT OF MENTAL HYGIENE

Isadore Tuerk, M.D., Commissioner

Kurt Gorwitz, Statistics Director

### *Toward Greater Knowledge and Understanding*

*The Department of Mental Hygiene is pleased to have its statistics newsletters published in the Maryland State Medical Journal. In releasing these reports, our hope is that they will engender a greater knowledge and understanding of the manifold mental health problems and of our efforts in this field.*

*All comments, criticisms, and suggestions will be most welcome.*

*Isadore Tuerk, M.D.*

Isadore Tuerk, M.D.  
Commissioner

### The Dollar Value of Reduced Patient Population Rates

THE GRADUAL DECLINE in the average daily patient population rate experienced by Maryland's mental hospitals since 1955 has produced a financial saving estimated at nearly 30 million dollars.

In 1955 our hospitals treated an average of 11,081 patients. This was equal to a rate of 414.2 per 100,000 total Maryland residents. Since 1955 the total population of Maryland has increased about three per cent annually, while the average

#### ESTIMATED MARYLAND SAVINGS RESULTING FROM REDUCTION IN PSYCHIATRIC PATIENT POPULATION RATE

Fiscal Year	Average Patient Population	Patient Population Rate*	Additional Patients if 1955	Additional Expenditures if 1955 patient population rate had prevailed		
			Patient Rate had prevailed	General Fund†	Capital‡	Total
1955	11,081	414.2	—	—	—	—
1956	11,253	407.4	188	\$247,969	\$1,880,000	\$2,127,969
1957	11,229	393.9	579	871,082	3,670,000	4,541,082
1958	11,154	380.1	1,001	1,608,980	3,470,000	5,078,980
1959	11,096	367.5	1,410	2,414,898	3,510,000	5,924,898
1960	10,830	354.5	1,824	3,452,242	1,480,000	4,932,242
1961	10,750	344.6	2,171	4,480,228	2,670,000	7,150,228
(Est.)						
Total				13,075,399	16,680,000	29,755,399

\* Rate per 100,000 Estimated Maryland Population

† Based on per Capita Expenditure During Fiscal Year

‡ Based on an Estimated Cost of \$10,000 per Bed

daily number of patients has *decreased* slightly. Preliminary figures for the current fiscal year indicate a continuation of this favorable trend. On the basis of data for the first eight months of this fiscal year, our 1961 average daily patient population is estimated at 10,750 with a rate of 344.6. If the ratio of 414.2 patients per 100,000 Maryland residents had continued, we would now have an additional 2,171 patients. The annual cost of caring for these men and women, based on current per capita figures, would be \$4,480,228. The total saving in the cost of treatment services for the additional patients in the six year period from July 1, 1955, to June 30, 1961, is estimated at \$13,075,399.

In addition to providing necessary services for these men and women, the department would have needed facilities for an additional 1,668 patients at an estimated cost of \$16,680,000.


The reduction in our patient population rates is largely due to the rapid increase in live discharges made possible by improved facilities, new drugs, and more modern methods of treatment. Future

progress depends on the development of a fully coordinated program of psychiatric hospital and community services constantly alert to the possible creation of new resources.

The dollar value of these restored lives would be impossible to calculate. Returning these men and women to a productive and normal environment has produced tremendous savings in hospital costs.

### PRACTICE FOR SALE

Fully equipped five-room medical office with large residence adjoining. Situated on the Nanticoke River for boating and fishing. Community has a local seafood packing industry with 300 employees. Mrs. Richard H. Saunders, Nanticoke, Maryland. Phone: TR 3-2115.



# BRINGS RESULTS SOONER AND MORE EFFICIENTLY IN MANY CASES OF **acne**

eratolyzes cornified follicle openings

...relieves excessively dry, scaly skin in chronic eczema



## The Heart Page

A SERVICE OF

Luis F. Gonzalez, M.D.—Editor

THE HEART ASSOCIATION OF MARYLAND

### RENOVASCULAR HYPERTENSION

**M**ORE ACCURATE DIAGNOSIS of renovascular hypertension is now possible by means of the radiohippuran renogram, differential renal function tests, and renal angiography, along with the usual excretory urogram. Obviously all patients with hypertension cannot be subjected to all of these procedures. The degree and severity of blood pressure elevation, as well as its predicted effect on the patient, must be considered in selecting patients for evaluation.

The conventional groups to be suspected of

John Young, Jr., M.D.

having renovascular hypertension are: those with significant blood pressure elevation beginning before age 20 or after age 50; those with sudden onset of severe hypertension; those who develop hypertension after an attack of flank pain; those in whom hypertension suddenly becomes more severe; and those with hypertension who show a difference in kidney size on the intravenous pyelogram. Observations of fifty-one patients studied at the University Hospital during the



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50,000 U.S.P. units  
100,000 U.S.P. units**

Bottles of 100, 500 and 1000 capsules.

past year and a half suggest that any patient with significant hypertension should be suspected of having renovascular disease.

A reliable survey test which can be quickly, cheaply, and easily performed to discover hypertension secondary to unilateral renal disease is not yet available. While the intravenous pyelogram might indicate such renal disease, it is now widely recognized that it may show no abnormality in many patients who have a significant lesion in one or both kidneys. The radiohippuran renogram might prove to be a useful screening method. The use of  $I^{131}$  Diodrast was not entirely reliable for this purpose. Schwartz and Madeloff have shown that scintillation counts over each kidney after intravenous injection of radiohippuran showed a definite quantitative relationship to para-amino-hippuric acid clearance in nine of our patients who had unilateral renovascular disease and in one patient who had bilaterally normal renal function. This observation would indicate that the radiohippuran renogram, properly performed, might give a fairly accurate estimate of comparative renal blood flows.

The first significant differential function test for renovascular hypertension was Howard's clinical application of White's experimental observation that the ischemic kidney excreted less water and less sodium. Connor, Stamey, Birchall, Schlegel, Revell, Peart, and others have reported experiences with split functions using various modifications of the original test as well as additional ones.

Some patients in our group have not shown the 50 per cent or greater decrease in volume and the 15 per cent or greater decrease in sodium in the urine from the ischemic kidney as the criterion for surgery originally stated by Howard. Four such patients with volume differences between the two kidneys of 29.3 per cent to 43 per cent have good results after nephrectomy. Three of the four showed decrease in sodium excretions from the ischemic side ranging from 11.7 per cent to 18.2 per cent, and the fourth had a 17.7 per cent increase in the sodium con-

centration from the side of the lesion. Inulin clearance, para-amino-hippuran acid clearance, creatinine clearance, percentage of filtered sodium excreted, percentage of filtered water excreted and respective U/P ratios were calculated on these patients, as well as on the others in our group. Clearly, the use of these tests has led to the discovery and successful treatment of hypertensives who would not have been candidates for operation solely on the basis of volume and sodium determinations.

Since November 1959, sixty split functions studies have been performed on fifty-one patients. Operations, usually nephrectomy, have been performed on thirteen of this group. Hypertension has been relieved in nine. Four received no benefit. Two of these had gross bilateral renal disease with suggestive ischemia on one side. Nephrectomy was considered the only possible means of treatment, but both died within a few days of operation. One of the four had unilateral pyelonephritis with 50 per cent difference in volume and 17 per cent difference in sodium. The fourth patient had a heminephrectomy and is to be reinvestigated.

Renal angiography is a supplementary procedure to obtain the necessary detailed information as to the type and extent of the vascular disease. It is done only in those patients who have some suggestive positive findings on the split function tests. Aortography with the newer contrast media by the femoral or the translumbar technique is safe with the use of conventional precautions.

The study of the hypertensive patient has become a team effort. At the University Hospital, it is a cooperative project involving the Divisions of Renal Disease and Hypertension, Metabolism and Endocrinology, Urology Radiology, Radioisotopes, and Pathology. A nationwide cooperative study is now being planned, through which these patients might be studied under a standardized protocol, to obtain additional information on the diagnosis and treatment of renovascular hypertension.





## MARYLAND TUBERCULOSIS ASSOCIATION

*Christmas Seal Agency for State of Maryland*

900 ST. PAUL STREET

BALTIMORE 2, MARYLAND

### OBSTRUCTIVE LUNG DISEASES

**Attilio D. Renzetti, Jr., M.D.\***

*Reprinted from the National Tuberculosis Association Bulletin, April, 1961.*

**T**HE MOST COMMON nontuberculous lung diseases leading to disability and death in the United States are a group of conditions variously termed chronic bronchitis, chronic asthma, or chronic pulmonary emphysema. Since widespread obstruction to the flow of air in passages of the lung is a dominant characteristic in all of them, they are often grouped under the general term, "obstructive lung disease."<sup>†</sup>

In recent years, the decline in deaths from tuberculosis has been almost entirely offset by an increasing death rate from obstructive lung disease. Examinations for disability under various governmental pension programs indicate that these illnesses frequently cause disability serious enough to prevent gainful occupation.

The causes of obstructive lung diseases are unknown. The incidence is greatest in men over fifty. Because these diseases develop slowly, their earliest stages often go unrecognized; early causative factors have often been forgotten by the time they are fully developed. Currently, cigarettes, chronic or recurrent bronchial infection, and air pollution are leading suspects. These may be either initiating or perpetuating factors.

The earliest manifestation of obstructive lung disease is usually a chronic cough, productive of phlegm or sputum. In time, this may become punctuated by recurrent episodes of more severe

cough, often associated with an otherwise mild upper respiratory infection. Progression is usually insidious over a period of years. With such progression, undue shortness of breath eventually becomes apparent, at first only during exertion, but later with less and less exertion until, ultimately, even the simple acts of talking, eating, or dressing may not be accomplished without it. Bronchial wheezing, either intermittent or persistent, frequently occurs at some point in the course of the disease, sometimes leading to the mistaken diagnosis of asthma.

When lung function deteriorates still further, the supply of oxygen to the blood may become deficient, causing cyanosis of the skin and fingernails. This decreased oxygenation may also lead to an increased number of circulating red blood cells, which may add a flushed appearance to the bluish discoloration of the face.

In a later stage, excessive accumulation of carbon dioxide in the body may affect the central nervous system, leading to mental slowing, irritability, lethargy, tremors, and eventually stupor or coma. At some time during this late phase of impaired oxygenation, heart failure may supervene with its characteristic water-logged swelling of the lower portion of the body. An illness that might be a slight strain on the respiratory system of a normal individual, such as mild, acute bronchitis, can be catastrophic for an individual in the later phases of obstructive lung disease. Such an occurrence may initiate a sequence of events leading to death, even in a person whose disease previously permitted considerable daily activity.

Instruments for measuring the speed at which a patient can "empty" his lungs of air have become invaluable not only for diagnosis, but also

\*Chief of the chest service, Baltimore Veterans Administration Hospital.

<sup>†</sup>The ATS Committee on Diagnostic Standards in Nontuberculous Respiratory Diseases is currently working on terminology and classification for this group of diseases.

for early detection of the disease, for following its progress, and for gauging its response to therapy. Such instruments are now simple enough and inexpensive enough to be available for use in a doctor's office. Ordinary methods for measuring deficient oxygenation of blood or retention of carbon dioxide are complicated and difficult and are generally available only in larger medical centers. Attempts are being made to simplify these methods.

Although treatment differs according to the stage of the disease, certain principles of therapy apply throughout its course. Since widespread airway obstruction is a predominant characteristic, measures to eliminate or prevent this should be taken. In general, airway obstruction arises from excessive contraction of smooth muscle in the bronchial walls, swelling of their lining tissues, blockage by secretions which are often thick and tenacious, or from collapse of unsupported smaller bronchi during cough, forced expiration or, in the later stages, even during quiet expiration. Since most of these obstructing factors result from bronchial infection and exposure to bronchial irritants, it is evident that smoking and other irritants should be eliminated and that respiratory infection should be avoided or promptly recognized and appropriate antibiotic therapy instituted early.

Adrenalin-like drugs administered as an aerosol to counteract smooth muscle spasm and inflammatory swelling of bronchial lining membranes are almost always required, both in hospital treatment and as a constant companion for self-administration out of the hospital. Expectorant medication and humidification of inhaled air are also helpful in liquefying thick, sticky secretions. Whether antibiotics should be used on some long-term schedule to prevent infection in these conditions is a problem currently under investigation.

In the later stages of obstructive lung disease, chronic hypoxemia, often accompanied by chronic carbon dioxide retention, may be present. For such situations the aforementioned therapeutic measures are also indicated.

The addition of any factor which tends to increase the degree of airway obstruction (such as infection) or to depress respiration (such as depressant drugs and chest wall injury) may pre-

cipitate acute respiratory failure. At such times, the methods for relieving airway obstruction must be applied even more intensively. Tracheostomy is often helpful in evacuating secretions and in increasing ventilation of the lungs. Oxygen therapy is frequently required as a life-saving measure. Unfortunately, in the later stages of the disease, some patients are already in a state of chronic carbon dioxide retention. The administration of oxygen without attention to adequate ventilation of the lungs may cause retention of such high concentrations of carbon dioxide that coma and death ensue. On the other hand, with advance recognition of this hazard, the cautious administration of oxygen in a concentration slightly greater than that present in air may tide the patient safely through the period required for other therapeutic measures to exert their beneficial effect.

Two significant advances in the diagnosis and treatment of this latter group of patients have recently been made. One is a simple method of estimating arterial carbon dioxide tension at the bedside; the other is a method for controlled administration of oxygen.

Sometimes, even cautious administration of oxygen by the usual methods will not suffice. Then a means of artificial respiration must be provided concomitantly with the oxygen therapy. Two types of apparatus are generally used for this purpose. One is the body respirator so widely used for the treatment of poliomyelitis. The other, which ventilates the lungs mechanically by intermittently inflating them via the mouth or a tracheostomy tube, is called an intermittent positive pressure breathing (IPPB) device. Artificial respiration by one of these instruments may be the only means of saving life in these desperately ill patients.

As with any chronic disease, the patient's understanding of the nature of his illness can contribute significantly to satisfactory management. Education concerning the avoidance of bronchial irritants, the early recognition of infection, the importance of taking prescribed medication, and the regulation of physical activity within the limitations imposed by his functional deficits will all contribute to delaying progression, minimizing disability, and diminishing mortality from obstructive lung disease.



## Woman's Auxiliary Medical and Chirurgical Faculty

MRS. E. RODERICK SHIPLEY *Auxiliary Editor*



JUNE, 1961

### Welcome to Our New Auxiliary TALBOT COUNTY



Mrs. Vincent O. Eareckson, Jr.

Mrs. J. Tyler Baker

Mrs. John E. Baybutt

Mrs. Donald F. Bartley

Mrs. William D. Noble

Mrs. J. T. B. Ambler

ON MARCH 21 a new auxiliary was formed in Talbot County, with a membership of fourteen doctors' wives. Mrs. John Baybutt, state chairman of members-at-large, was the acting

coordinator for the group. A constitution and a proposed slate of officers were ready to be acted on at this organizational meeting. Representatives of the State Auxiliary present were Mrs. William

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S. Stone, president; Mrs. Norman Oliver, president-elect, and Mrs. Albert E. Goldstein, parliamentarian.

Newly elected officers and chairmen are as follows:

*President*

Mrs. William D. Noble

*Vice President*

Mrs. J. Thompson Ambler

*Corresponding Secretary*

Mrs. Guy M. Reeser, Jr.

*Recording Secretary*

Mrs. Vincent O. Eareckson, Jr.

*Treasurer*

Mrs. J. Tyler Baker

*Membership*

Mrs. J. Thompson Ambler

*A.M.E.F.*

Mrs. William L. Winters

*Bylaws*

Mrs. Kurt Lederer

*Hospitality*

Mrs. Harry M. Walsh

*Doctor's Day*

Mrs. John E. Baybutt

*Legislation*

Mrs. Ludwig J. Eglseider

*Civil Defense*

Mrs. R. Lane Wroth

*Newsletter*

Mrs. Erving Douglas Hardy

We establish a perennial flower garden by the addition of hardy varieties of plants from time to time. They grow and establish themselves as a constantly improving specimen, becoming more productive year by year. It is an accomplishment to have such a fine variety as the Talbot County Auxiliary with which to extend our borders. We are gratified to add it to our Auxiliary family.

Virginia Shipley

## WOMAN'S AUXILIARY PLANS 38th ANNUAL CONVENTION

**F**OODS FOR SURVIVAL and common sense safety precautions for aged persons around the home are two outstanding presentations slated for the thirty-eighth annual convention of the Woman's Auxiliary to the American Medical Association. The meeting is being held in conjunction with the AMA annual meeting, June 26 to 29, in New York City. Auxiliary headquarters will be the Hotel Roosevelt.

The convention will formally convene Monday morning, June 26 with reports of officers and chairmen and election of the 1962 nominating committee. The opening will be preceded by committee and board meetings on Saturday and Sunday, June 24 and 25.

The annual tea and fashion show honoring the president, Mrs. William Mackersie of Detroit, Michigan, and the president-elect, Mrs. Harlan English of Danville, Illinois, will be held at the United Nations building Monday afternoon.

In addition to regular business sessions on Tuesday, presentations will be made in the fields of civil defense, safety, health careers, mental health, and community service.

Past presidents of the AMA Auxiliary will

be honored at Tuesday's luncheon. Guest speaker will be E. Vincent Askey, M.D., AMA president.

New national officers and committee chairmen will be introduced at Thursday morning's workshop. The AMA Communications Division will put on a "Speaking Up For Medicine" dramatic presentation to illustrate how Auxiliary members can help to promote the medical profession via local radio and TV, in the newspapers, and in their communities.

If in some future time our American Citizens have completely lost their freedom, historians may look back and be puzzled as they try to decide "the cause of death." Probably they will conclude that the desire for "something for nothing" caused the death of freedom. The "duration of illness," however, will be more obscure to them, even as it is to us, who are puzzled indeed, as we try to decide just when this "something for nothing" illness really began.

From a speech by George J. Hess, M.D.



## Introducing Our County Presidents

*Mrs. Walter M. Hammett, President  
Woman's Auxiliary to the  
Baltimore County Medical Society*



**M**ARY HAMMETT was born and reared at Baldwin, in the Long Green Valley, where she now resides. She was educated in the Baltimore County schools and attended Maryland State Teachers College at Towson and the Maryland Institute in Baltimore.

For more than sixteen years Mary was associated with the American Photograph Corporation in New York. During this time she did personnel work, public relations, and training. For seven years she was district manager.

Gardening is one of Mary's most enjoyable pastimes. She belongs to the English Speaking Union Garden Club, of which she is competition chairman.

Baltimore County Auxiliary members have had a busy year. Last October they sponsored the Civil Defense Seminar at Pikesville. In June they will award the fourteenth nursing scholarship to be offered by this auxiliary in ten years. During the past months they have made a concerted effort to provide better programs to stimulate more active participation of the members. The morning coffee meetings at the homes of members, featuring speakers on timely subjects, have been well attended.

### 1960-61 ANNUAL REPORT OF THE PRESIDENT

**A**S IN EVERY successful year, the president's report merely reflects the excellent work done by the committee chairmen; thus it was in Maryland this year.

Among the duties I performed as president was that of being presidential delegate to the annual convention of the Woman's Auxiliary to the A.M.A. in Miami in June. I participated on a panel on membership at that time. I attended the semiannual conference of presidents and presidents-elect in Chicago in October. On the

**Mrs. William S. Stone**

national level, I was a regional chairman for A.M.E.F. and attended the Fourteen State Eastern Regional Conference on Legislation of the A.M.A. in Hershey, Pennsylvania.

Within Maryland I spent two days at the Governor's Conference on the Aging in College Park, the Civil Defense Seminar in Pikesville, the state convention of the Future Nurses Clubs in Parkville, and all delegates' meetings and conferences of that group. The Student A.M.A. Auxiliary of the University of Maryland invited me to

speak at their tea at the beginning of the school year. I visited all county auxiliaries except Alleghany-Garrett, and installed a new auxiliary in Talbot County. As an invited guest, I attended the state conventions of Pennsylvania, New Jersey, and Delaware.

**A.M.E.F.** A total of \$1,500 was raised this year through letter campaigns, sale of Christmas and sympathy cards, and the "Can of Corn" idea.

**RECRUITMENT** There are now one hundred Future Nurses Clubs in junior and senior high schools throughout the state. Auxiliary members have provided transportation for the members to delegate and annual meetings. The students themselves gave \$100 to CARE for the purchase of books on nursing and established a \$300 scholarship for a University of Maryland student.

The auxiliaries have loaned \$1,700 to nurses, have given a \$300 scholarship to the University of Maryland to be given to a freshman nursing student, have given \$250 each to Johns Hopkins and the University of Maryland for scholarships to two students of their choice, and have loaned \$500 each to two other medical students.

**DOCTOR'S DAY** was celebrated throughout the state after the official declaration by Governor Tawes. A copy of his proclamation was sent to all county auxiliaries. Flowers were placed in public buildings, on graves, and on altars. Outstanding doctors were honored in the newspapers. One county paper pictured all of the doctors with accompanying biographical sketches. There were also parties for the men.

**CIVIL DEFENSE** "A Way to Survive" was the theme of an all-day program held in Pikesville Armory in October, with 350 leaders in all fields attending and speakers coming from Norfolk and California. The Armed Forces cooperated by sending a 600 pound mannikin that simulated wounds and injuries likely to be encountered. As a result of this meeting, the Junior Chamber of Commerce of Reisterstown built an outdoor shelter which was manned and stocked with food and opened to the public. The State Department of Health consulted with us on planning a similar program for allied medical personnel.

**SAFETY** A joint project of the Baltimore Safety Council, the Council of P.T.A.'s and the Woman's Auxiliary to the Baltimore City Medi-

cal Society was "Accident School for Moms and Dads" with ten P.T.A.'s requesting the program. Dr. William D. Lynn was the speaker at these meetings, and an Auxiliary member was present to pass out pamphlets on safety. We were also represented at the Governor's Conference on Safety and in the Fire Prevention Week parade.

**MENTAL HEALTH** One Auxiliary gave ninety-six hours to a mental hospital; others bought canteen tickets for patients without funds; others manned a Christmas tree at a local hotel and used the funds to buy toilet articles for patients; others collected clothing and bought Christmas gifts for patients.

**PUBLICITY** All meetings have been well covered in the local newspapers and several pages in the MARYLAND STATE MEDICAL JOURNAL have been devoted to the Auxiliary. In each issue we have had articles and pictures. We have had two issues of our State newsletter, "Hygeia Filiae," sent to every doctor's wife in Maryland.

**S.A.M.A.** Auxiliary at the University of Maryland has approximately 125 members with an average attendance of fifty to sixty at the meetings. The members have acted as hostesses for school functions and are active in civic affairs and welfare. The Auxiliary contributed \$150 to help send a delegate to their annual convention in Chicago. This chapter was hostess to the Eastern Regional meeting in April and has several members on national committees.

**COMMUNITY SERVICE** The Montgomery County Auxiliary won the certificate of merit, given by the Montgomery County Tuberculosis and Heart Association, for the second year of their outstanding contributions of time and effort. The Medical Research Committee of the Baltimore City Auxiliary, in conjunction with the Maryland Society for Medical Research, has made 110 placements of small animals in schools to teach children the care and feeding of animals, dietary deficiencies, and genetic problems in the hope of developing an early interest in science.

**MEMBERSHIP** We have 914 members, including 55 members-at-large, and organized one new auxiliary this year.

**LEGISLATION** All auxiliaries and doctors' wives received up-to-date information on the various bills before Congress pertaining to health and medicine. A questionnaire revealed that many worked actively during the presidential campaign.